MODERN BUSINESS

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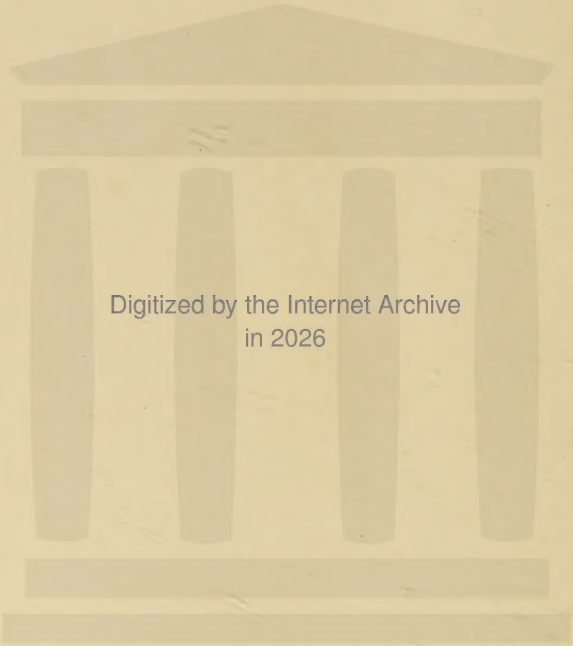

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Modern Business

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AND FIRST EDITOR-IN-CHIEF
OF THE

MODERN BUSINESS SERIES

Accounting Principles

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PREFACE

A technical knowledge of accounting, as practiced today by the certified public accountant, is not a prerequisite for the business executive who wishes to administer efficiently the affairs of his company. It is essential, however, for him to acquire a thorough understanding of those principles upon which modern accounting practice is based.

All business transactions sooner or later are reflected in the accounts of a concern and it is to the advantage of the business man to know whether or not such transactions have been recorded in the proper manner. Where a knowledge of accounting principles is lacking, the executive is seriously handicapped.

But the greatest use to which the business man can put his knowledge of accounting principles is not in making certain that his business dealings are properly recorded as a matter of historical interest. It is his understanding of the recorded data that helps him in guiding the affairs of his business and the formulating of policies for the future. An understanding of the principles makes possible the proper interpretation of the records, which, in turn, is the influencing factor in making decisions.

In this Text, Dr. Stevenson presents the important things that every business executive should know about accounts. Reference to assets, liabilities, income and expense accounts, accruals, depreciation, working sheets, balance sheets, profit and loss statements, and the like, are a cause for much confusion among the uninitiated, and he has told the story of what these terms stand for in a clear and interesting manner.

Long experience as a teacher and college administrator has given Dr. Stevenson ample opportunity to study and to solve the many difficulties connected with the presentation of a subject so complicated as modern accounting. He served on the staffs of the University of Michigan, University of Iowa, and University of Cincinnati. The superior quality of his work both as a teacher and administrator soon brought him further recognition in an invitation to the Deanship of the School of Business, University of Minnesota, which position he still holds.

The broad pedagogical basis of the book, however, has been amply supplemented by the practical experience of his collaborator, Mr. Frederick H. Hurdman, C.P.A. For many years Mr. Hurdman has been recognized as one of the country's leading accountants, as evidenced by his election to the Presidency of the American Institute of Accountants. His contribution to the present text has enriched it not only by drawing freely upon his intimate contact with modern practices but by bring-

ing an analytical ability of the highest caliber to bear upon the maze of accounting detail connected with the complicated systems of modern business organization.

EDITOR-IN-CHIEF.

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ACCOUNTING PRINCIPLES

CHAPTER I

PURPOSES OF ACCOUNTING RECORDS

1. *Growing importance of accounting.*—One of the most remarkable developments in modern business organization has been the rapid increase in size of the typical business concern. Today, one can hardly discuss the financial affairs of even a moderate-size business without expressing the figures in terms of hundreds of thousands. Capitalization figures in the millions are as common today as were those of tens of thousands less than a generation ago. Annual sales, expenses, and construction expenditures have increased in like amounts. Similarly, the number of employees brought together under one management has grown to an extent which makes a payroll of a thousand employees seem relatively small.

It would be most interesting to review the development of the institutions and the organizations that have made this tremendous change possible. Such a review would include a survey of the dominant corporations in such fields as the manufacture of automobiles, electric equipment, and household appli-

ances. It would include the development of the vast transportation systems and the newer means of communication—the telephone, and the radio. It would show that most of the methods of doing business today are results of the immediate past, and that today those concerns which have recognized the significance of the newer conditions have survived. But it is not the purpose of this Text to go into this subject in detail. It is our object, here, merely to point out the effect of these things upon accounting.

The growth in the size of business organizations has increased the importance of accounting as a means of control. It is possible for the proprietor of a small enterprise to oversee the operations of his business without the use of an extensive set of records. In a large organization, however, the manager requires the assistance of a fact-gathering agency to enable him to view the operations of the concern as a whole. The large concern is managed by a number of departmental or divisional heads, who, in turn, have control over subsidiary officials and minor executives. A typical organization has the appearance of a pyramid, with the chief executive officer at the top. The heads of functional departments, few in number, come immediately below and are followed by a larger group of junior executives. These control a still larger group of superintendents, shop foremen, district agents, etc., who direct the great army of workmen and salesmen.

It is clear that these great organizations, involving

intricate departmental activities, are not simply set in motion and then allowed to operate automatically. The successful correlation of all the units into a smoothly operating mechanism is dependent upon the skill with which the management maintains control. The success of executive control, in turn, is dependent upon the adequacy and completeness of the operating statements furnished by the accounting department. Accounting today is far more than a mere record of bygone transactions; it is a necessary instrument of current management—a means of keeping the executive informed at all times of the essential facts and details of the internal workings of the business.

2. *Accounting as an aid to executive control.*—The development of business organization to its present size and efficiency has been accompanied by a similar advancement in accounting. It is clearly recognized by executives that the large corporation could not be effective without the aid of modern accounting. From this, one might be led to claim for accounting a major part of the responsibility for contemporary business efficiency. This does not mean that accounting *caused* the development of modern, large-scale business, but it does mean that it was essential to its development. Certainly, the two have proceeded hand in hand.

Accounting is a tool of administration. It is the means by which the details of business operations are marshalled before the eyes of the executives. It is

the device by which those in control are enabled to see the results attained by each department and division. Accounting furnishes the summaries of past operations, and on these are based the decisions as to future policies. Prompt and accurate reports, statistics, and statements are just as much a part of the equipment for executive control of operations as are drafting instruments to the architect.

3. *The development of accounting procedure.*— The development in the scope and usefulness of accounting during the past few years implies that it is different in its essential features from what it was formerly. The fundamentals of account keeping, however, date back many centuries. It is impossible to determine, from historical records, just when the first accounts used in recording business transactions came into existence. It can be assumed that some form of permanent record was used as soon as exchange or barter involved more than the mere exchange of one article directly for another. As soon as an adjustment or a deferred payment became part of a transaction, it became necessary to keep records as evidence. There are evidences of book accounts in the records of the earliest civilizations.

The first printed book on the subject of double entry bookkeeping, which is the basis of modern accounting, was published in 1494. This was included in a treatise on algebra by an Italian, Lucio Paciola. From that time, down to relatively recent years, very little was added to the science of accounting.

Many people think of accounting as a routine process of recording transactions for the purpose of preparing evidence of debts legally contracted. This conception is a natural reaction to the uses of book records in the past. Until very recent times, such records were used chiefly for the purpose of sending out periodical statements or bills to customers, to determine the amounts due on creditors' accounts, and to ascertain the amount of cash in the bank or on hand in the business. Once a year, a summary would be made to determine the amount of profits earned. These summaries frequently entailed a great deal of extra work, such as the taking of inventories, and the making of appraisals of other forms of property. The "shut down" for inventory was an annual occurrence.

With the development of business on a larger scale, it became necessary to establish more expeditious methods of determining the progress of a business. It is an expensive matter to shut down a plant for a week or two merely to find out whether or not profits have been earned. Profits are earned from operations, and to stop production means that earnings cease during that period. The first demand for more adequate accounting records, therefore, came from a need for prompt information on past operations. Some form of continuous record was required which would disclose the results of all transactions.

As the problems of management grew more difficult, it became necessary to make a still more exten-

sive use of the accounts for current control. It is no longer possible to wait until the end of the year to check up on the financial affairs of a concern; to do so would result, in many cases, in dismal failure. It is necessary to know just what is happening to affect the financial status throughout the year. Many concerns prepare complete statements quarterly or monthly. In fact, some executives have reliable statistics furnished by the accounting department after each day's operations. These newer uses of accounting data have far superseded the older uses in modern management.

4. *What the executive demands from the accounting system.*—The executive in charge of a business concern is constantly making decisions with respect to the uses of resources under his control. This means that he must decide upon the most effective methods of using the plant equipment, upon the types and styles of goods to be produced, the number of workmen to be employed, the prices at which the products can be sold, what territories should be solicited, when to borrow funds, and hundreds of other questions. His object, of course, is to find the most economical methods of producing the commodities or services so as to yield the highest possible net profits. Finding better methods and preventing losses in operation are the essence of executive action.

The progressive executive makes use of all the facts that he can obtain in order to assure himself that his judgments may be sound. This is true

whether the business is large or small, but the difficulty of obtaining the facts increases with the size and complexity of the organization. When a business enlarges beyond what may be termed a "one man" establishment, the need of a fact-gathering agency for the executive becomes imperative.

There are many types of information which can be supplied only by the accounting records. Most important are the analyses of expenses. The accounts show not only the total expenses, but they should also reveal, in detail, the causes for the amounts involved. It is possible, by carefully scrutinizing an expense analysis, to fix responsibility for changing costs. If an executive has a clear understanding of accounting statements, he can detect elements of inefficiency and occasions of unnecessary loss early enough to correct them before much damage is done.

The statements may be arranged to show sales and profits by classes of goods so as to determine which ones are the most profitable. They are most valuable when they show both for sales and costs a comparison of figures with other statements conveying similar information applied to periods of the same length. Data thus shown may be used as something upon which to base policies or to analyze the numerous activities of the concern. In fact, it is possible to provide the executive with a complete analytical survey of the most minute details of operation, so that he can have a complete picture of the innermost

workings of the business, without leaving his desk.

Since the accounting records of a modern business do furnish this mass of information for executive control, it is obvious that every person in a managerial position should be able to interpret such statements intelligently. Business men who know how to study accounting reports are better equipped to meet the conditions of modern competition.

5. *Outside demands for information.*—So far, emphasis has been placed upon the use of accounts solely for those in managerial positions. Most of the recent developments in accounting have been in the interest of those who hold positions of responsibility in directing or supervising the operation of business enterprises.

There are other interested parties outside of the management group, however, who have need of the reports furnished from accounting records. The great mass of investors in the securities of corporations, for example, are anxious to have reports on the condition of the concerns in which they have placed their savings. Most of the larger corporations furnish balance sheets and income statements at frequent intervals for the benefit of investors. All corporations whose securities are listed on the principal stock exchanges are required to furnish financial statements periodically.

Bankers are particularly interested in securing data on the concerns that apply for loans. It is practically an impossibility today, for a company to bor-

row from a commercial bank without submitting a financial statement, and, if the line of credit is to be maintained, at least annual reports must be rendered.

Investment bankers, brokers, and other dealers in securities also need accounting data on corporations as a regular part of their business. Such concerns are engaged in the buying and selling of securities. It is necessary, therefore, to have information at hand with which to appraise the value of the different types of stocks and bonds handled.

Another important use for accurate accounting records is in the computation of income tax assessments. In many cases, the assessments are so large, and the methods of determining the amount of taxable net income are so involved, that a special field of accounting has been developed. A rather substantial branch of the public accounting profession devotes its entire time to the income tax field.

These are only a few of the many outside uses to which modern accounting records are put. With the constantly growing complexity of our industrial life, we are sure to find the accounting records used still more extensively.

6. *Every executive needs accounting knowledge.* —In the organization of a business concern along functional lines, accounting is set up as one of the main departments under the control of one of the chief executive officers. The chief accountant, or controller as he is often called, holds a position coordinate with the production manager, sales manager,

and personnel manager. It might appear that such a classification of duties would result in placing all accounting matters in one department—that those in other departments would have little use for a knowledge of the subject. The truth, however, is that all of the executives in the organization use accounting to a considerable extent.

An executive in any division of an organization finds it necessary to analyze the facts and figures as they pertain to his particular phase of the concern's activities. He cannot hope to interpret the statements prepared for his use unless he knows something of the technique of accounting. This fact is sometimes overlooked by well-meaning officials who think that accounting is in a separate field and of no significance to them.

In assuming such an attitude, an executive denies himself the use of a most useful tool in effective management. The accounting records are prepared primarily for executive control, and, if those for whom the statements are prepared are unable to use them because of their lack of knowledge of the subject, the business suffers a double loss. It loses the amount invested in maintaining an adequate system of accounts, and it also suffers from the lack of a constructive management based upon the valuable data presented in the accounting summaries.

Sometimes a business which is apparently in a very prosperous condition, with constantly increasing sales, may find upon careful analysis of the accounts

that it is gradually getting into a precarious financial position. It is possible, for example, that the ratio of cost to sales is increasing, thus narrowing the profit margin. This fact would not be evident to the sales manager, or to the production manager, unless he is able to interpret the information shown in the statements.

A business man who has only a smattering of accounting and who lacks experience in interpreting financial statements is handicapped because of his inability to look beyond the records and to see all of their implications. He is likely to be misled, if he reads the statements too literally, or if he accepts, without question, the interpretations placed upon them by others.

7. *Accounting records a source of facts.*—Accounting consists chiefly in classifying business facts. It is not a particularly complicated process, although it often appears to be rather mysterious to the uninitiated. There exists in the field an accepted code or method of procedure, which is used and understood by accountants in every line of business. This code prescribes in a general way the methods of collecting essential facts, and of classifying them properly.

There are certain types of statements that are prepared for all concerns. The balance sheet, which shows the financial condition of a business on a definite date, and the profit and loss statement, which shows the amounts of operating and non-operating profit and loss accounts over a period of time, are

products of the accounting department in every business. The further subdivision of these statements for the use of departmental executives, however, depends upon the character of the business conducted, and the type of organization involved. Summaries usually are available for all of the different departments or activities.

It is the function of the accounting system to afford a means by which all of the important facts can be collected in one place expeditiously and put into convenient summaries. If the system is properly devised and operated, every individual who has access to the records should be able to find the facts needed to form a sound opinion as to the progress and condition of the business, or of any part of it.

8. *Standardized procedure.*—All accounting systems should be based upon the same fundamental principles and, where possible, should use the same code of terms and abbreviations. This would permit the ready comparison of statements of different business concerns. Thus it would be possible for the accountant of one organization to take over the work of directing the accounting department of another without encountering any serious difficulties. The language of accounting, in other words, should be standardized.

To some extent this has been done. However, it is only in the methods, the procedure, and the fundamental structure of accounts that progress has been made in standardization. The analysis of transac-

tions varies widely among accountants. One accountant, for example, might consider the expenditure of a certain sum of money as a capital charge, whereas another using the same data might classify the payment as an expense. In one case, it would be carried on the balance sheet as an asset; in the other, it would be listed as an expense item. The method of making the accounting entries and of preparing the statements would be the same, but the interpretation of the facts would be different.

9. *Modernized technique.*—The modern accounting office technique bears little resemblance to the routine of the bookkeeping office of thirty years ago. It used to be assumed that there should be a chronological record of all transactions maintained in what was called a *day book.* A second book, called the *journal,* was used simply for the purpose of classifying each transaction into the accounts affected. A third book, called the *ledger,* contained the accounts into which the journal entries were posted. Today, any concern that retained this method in detail would be considered decidedly behind the times. Machinery and short-cut techniques have completely changed the character and appearance of the accounting office.

In changing the outward appearance of the office routine, however, the three fundamental steps were not discarded. It is essential to keep some form of record, in which transactions are listed chronologically, to analyze transactions into the appropriate

account classifications, and, finally, to enter the amounts involved in the proper accounts. The three functions can be performed in the modern office much more economically by the use of specialized books of entry and bookkeeping machines. There are many technical problems involved in the construction of a complete system of accounting, and some accountants specialize in devising and constructing systems. This has come to be such an important part of accounting practice as to constitute practically a profession by itself.

10. *Two types of accounting proficiency.*—There are two phases of accounting work. One has to do with the technique or the operating of the system, while the other involves the interpretation of all data, including the transactions and the accounting statements. It is possible for a person to be proficient in one, without being particularly well equipped to do the other. That is, a person may understand the office routine and the structure of the accounting records, without being able to present a clear analysis of the operations of an enterprise. Another person, on the other hand, might be able to interpret accounting statements exceptionally well and still be somewhat at a loss in finding his way through the details of an accounting system.

From the standpoint of successful business management, it is the interpretative type of accounting knowledge that is most useful. There are some executives who rely upon their accountants for all in-

terpretations of their accounting records. This is not always the best practice. The executive usually is in a much better position to consider the problems of the business from all angles. Furthermore, he should be able to pick out the essential facts from the accounts and form correct conclusions with greater success than anyone else connected with the organization. To do this effectively, he should be proficient in the interpretative phases of accounting procedure.

11. *Accounting is an interesting subject.*—The interpretation of accounting records is in reality a most interesting field of study. Financial statements furnish, to the business man who understands how to use them, an interesting means of diversion. The financial records tell the story of business adventure. They show the ups and downs, the successes and failures of the management. Even though they may be presented in columns of figures and comparisons of totals, there are possibilities of interpretation that will yield information as interesting as anything that may be found in fiction. There is nothing mysterious about accounting and, after mastering the fundamental principles, there is pleasure in constructing the story of a business from its record.

REVIEW

Mention some of the causes for the rapid growth of business organizations.

Show how the development of large business units has contributed to the importance of accounting.

Explain in what respects modern accounting differs from older methods of record keeping.

Enumerate the principal classes of information which the executive requires from an accounting system.

Would a detailed description of the operations of a business be sufficient for the purposes of executive control?

NOTE: The reviews throughout this Volume are for the personal convenience of the reader in testing his understanding of the chapter. It is not necessary or desirable for subscribers to submit written answers to the Institute except in a case where they may feel uncertain as to their grasp of the question under consideration.

CHAPTER II

DEVELOPMENT OF THE ACCOUNT

1. *System in accounting records essential.*—The ultimate object of accounting procedure is to show, in summary form, the results of the many transactions and forces affecting the business. To do this requires an organized system for classifying the transactions in a convenient way. In the first chapter, the point was emphasized that three steps in the accounting process must be recognized; namely, the maintenance of a chronological record of transactions, the itemizing of the transactions in accounting terminology, and the transfer, or posting, of the items to their proper account titles. Carrying out these steps in the most expeditious manner possible constitutes the system.

There is nothing mysterious about this process, although many people are disturbed by what appears to them to be a most complicated maze of records. It is the mass of data caused by the volume of business transacted, which must be entered into the proper books, that gives the impression of complexity in the system. Underlying every system, however, there is a certain orderliness of method which is the same, no matter whether there are fifty transactions

or five thousand to be recorded. It is the purpose of this Text to explain the fundamental concepts that guide all systems, regardless of size.

2. *The account.*—Accounting is concerned with the recording of facts of monetary value. Transactions are of significance in the accounts only in so far as there are value changes in the things represented in the account classifications. This considerably simplifies the accounting procedure as compared with what would be required if several different units of measurement were involved. Value aspects of properties, liabilities, and ownership claims can change in only two directions—they can increase or decrease. Entries, therefore, represent additions to or subtractions from the amounts already appearing in the accounts.

An account may be defined as a "title, heading, or identifying caption, under which are recorded the monetary increases and decreases pertaining to any one thing, or class of things." These titles pertain to the things of significance in the conduct of the business, such as cash, building, merchandise, customers' accounts, creditors' accounts, and the net worth of the proprietor.

There will be as many account titles, of course, as there are different things, or classes of things, about which information is desired. In a very simple system, the number of accounts would be limited to a few items; in a very large organization, the titles would run into the hundreds. There should be

a sufficient number of accounts to give all the information needed for management, but it is a needless expense to maintain titles that are not of some service.

The account may be looked upon as the basis for all accounting technique. It is the starting point for classification and constitutes the unit for statement summaries. It is important, therefore, that the construction of the account be understood as a basis for all statement analysis.

3. *Construction of the account.*—It would be possible to list all increases and decreases in an account in a single column, making the necessary additions and subtractions after each entry. This process would make it possible to determine the actual value condition after each transaction. If we take the cash account, for example, we could start at the head of the column with the amount on hand at the beginning of a period and then add the amount of each receipt, and deduct the amount of each payment, as it occurs. We would have, as a result, a long tabulation of amounts showing a complete history of the cash transactions. But such a method would lack that orderliness and convenience which is essential where the transactions are numerous.

As a very simple illustration, we might consider a method of recording conveniently the effect of the following transactions upon the cash account of John Smith, who has just embarked upon a trading business:

June	2, invested cash in the business	$20,000
	3, paid for store and office fixtures	2,500
	4, paid for stock of merchandise	6,000
	5, paid freight bills on merchandise	250
	7, received cash for sale of merchandise	300
	12, paid for telephone service	30
	13, paid salaries of clerks	350
	14, received cash on account from a customer	45
	15, paid bill of a creditor	500

It is clear that the transactions for June 2, June 7, and June 14 all caused increases in cash, while the others resulted in decreases. The balance of cash on hand June 15 could be determined by the very simple process of subtracting the decreases (payments) from the increases (receipts). In a case where only nine entries are involved, this would be the most convenient method. However, if the number of transactions were increased to correspond with the actual conditions in a business, a chronological list, such as given above, would not be at all convenient. Some systematic method of separating the increases from the decreases is necessary. This is accomplished, in a very simple manner, through the conventional account form, illustrated on page 21.

In this instance, the increases are all placed in one column *on the left,* and the decreases in another column *on the right.* The entries are placed in the respective columns in chronological order so that it is possible, at any time, to determine the balance merely by obtaining the totals from both sides of the account for the same date. In this case, for example,

the total increases to June 8 were $20,300 and the total decreases were $8,750, leaving a balance on that date of $11,550.

CASH ACCOUNT

Increases (*Receipts*)				Decreases (*Payments*)			
June	2	Investment	$20,000.00	June	3	Paid for fixtures	$ 2,500.00
	7	Rec'd for mdse.	300.00		4	Paid for mdse.	6,000.00
	14	Rec'd from customer	45.00		5	Paid for freight	250.00
					12	Paid for telephone	30.00
					13	Paid salaries	350.00
					15	Paid a creditor	500.00
					15	Balance	10,715.00
			$20,345.00				$20,345.00

4. *The account form.*—This is the conventional form for all accounts. It contains two money columns in which to classify the increases and decreases pertaining to the account title. In addition to the money columns, there is space for identifying data, such as the date and the reference to the particular transaction involved. This is indeed a very simple technique and is readily understood when applied to the item of cash.

The difficulties arise in applying the method to other accounts. Cash is only one form of asset in the possession of a business enterprise. Accounts must be kept for all of the other property items, such as buildings, fixtures, machinery, tools, merchandise, customers' accounts, etc. A complete set of accounts also includes accounts with creditors and the net

worth of the business. All data pertaining to changes in the money amounts of these items must be recorded in accounts similar in form to the one illustrated. However, there are certain apparent differences which should be pointed out so that the system as a whole may be clearly understood. These differences are based upon a classification of accounting data into three broad classes: namely, assets, liabilities, and proprietorship. The use of the account form in each of these classes will be explained in later sections of the chapter.

5. *The point of view in accounting.*—In applying the technique of accounting to the different classes of data, it is necessary to have a definite point of view from which to examine the transactions to be recorded. In the first place, it is essential to have clearly in mind whose books are being kept. In a great many transactions, there are two parties involved and their accounts will be affected in opposite ways. An asset in the form of a customer's account on the books of one concern is a liability in the form of a creditor's account on the books of the other. All transactions between these two parties should be recorded in exactly opposite ways in their respective books.

A second consideration involves the recognition of the business enterprise as an entity entirely separate from the personal interests of the proprietors, stockholders, or other investors. A proprietor may have dealings with other parties which in no way affect

the finances of the business whose books are under consideration. On the other hand, a partner in a partnership or a stockholder in a corporation may have transactions with the particular concern, which are entirely apart from his proprietory interest. In other words, for accounting purposes, we may look upon a business as a personage in itself. It is this person who owns the assets and owes the liabilities. The difference between the total assets and the total liabilities constitutes the net worth of the proprietor in the venture.

All transactions should be viewed from the standpoint of the business whose books are being kept. In the illustration of a cash account given earlier in the chapter, we have a series of transactions affecting the business in which John Smith invested $20,000. He may have other funds and will have many transactions which will not be of any significance to this particular trading concern. The books are maintained from the viewpoint of the *John Smith Trading Concern.* They are not the books of *John Smith.*

The personification of the business enterprise is a convenient device for accounting purposes. We may now discuss the three broad classes of accounts from this point of view.

6. *Asset accounts.*—An asset is any item of value, tangible or intangible, of which the title rests in the possession of a business. Tangible assets consist of buildings, equipment, merchandise, and other assets that can be appraised. Intangible assets include

claims against others, and rights or privileges which a concern may have that give it an advantage over its competitors, such as patent rights, trademarks, franchises, and goodwill.

Changes in the value of asset items are recorded in the same manner as those for cash. Increases are placed in the left-hand column and decreases in the right-hand column. In the case of the transactions affecting buildings, for example, the purchase price and all additions and improvements are entered on the left side. The values of buildings disposed of, either through sale or abandonment, are recorded on the right side. An account for buildings might appear as follows:

BUILDINGS

Increases				*Decreases*			
June	1	Purchase price	$50,000.00	June	30	Disposed of bldg. materials for cash	$ 1,000.00
	15	Paid contractor for making improvements	5,000.00		30	Balance	56,500.00
	25	Cost of adding room	2,500.00				
			$57,500.00				$57,500.00

This account shows that the total charges or costs for the buildings owned by the business were $57,500. Offsetting these costs there is an item representing the amount obtained from the sale of some building materials. The increases exceed the decreases by $56,500, and this is the balance of the account at the end of June. It represents the book value of build-

ings in the possession of the firm at that time.

Accounts representing the other classes of assets are constructed on the same basis. This rule always prevails: *Increases are placed on the left side of the account and decreases on the right.*

7. *Liability accounts.*—In the normal operation of a business, obligations for future payment are incurred. It is just as essential to keep complete records of outstanding debts as it is to maintain asset accounts. The columns representing increases and decreases in liabilities are the reverse of those in the asset accounts, however. The reason for this difference will be seen more clearly later on. It will be sufficient here to point out the fact that liabilities, from the standpoint of the business enterprise, are the opposite of assets. They are, in a sense, offsets to assets. The assets constitute the source of payment of liabilities. If, then, the balances appear on the *left* side of asset accounts, it would be appropriate to have the balances on the *right* side of liability accounts. This is the procedure followed in modern accounting.

As an illustration of one type of liability account, we may assume that John Smith, whose business books are kept, owed the Mercantile Corporation $2,000 on July 1. He purchased goods on three occasions during the month and paid invoices coming due on two other dates. The account of the Mercantile Corporation on John Smith's books would appear as on page 26.

MERCANTILE CORPORATION

Decreases				*Increases*			
July	3	Paid invoices due	$1,500.00	July	1	Balance	$2,000.00
	15	Paid invoices due	500.00		5	Purchased mdse. on 10-day credit	500.00
	31	Balance	1,800.00		11	Mdse. purchased on 30-day credit	300.00
					28	Mdse. purchased on 30-day credit	1,000.00
			$3,800.00				$3,800.00

This account shows that the total amount of indebtedness to the Mercantile Corporation during the month of July was $3,800, and that $2,000 was paid, leaving a net balance of $1,800 still due at the end of the month. *Increases were placed on the right side of the account and decreases on the left side.*

It will be noted that this is just the reverse of the entries which would be made for the same transactions on the books of the Mercantile Corporation. The account of John Smith on *their* books would be an *asset* account, and the increases and decreases would appear in accordance with the rules governing assets accounts.

All liability accounts are kept in the form shown. Accounts payable, notes payable, mortgages, and bonds are types of liabilities which appear on the books of business concerns.

8. *Proprietorship or net worth accounts.*—The

difference at any time, between the total assets of a business concern and the total liabilities represents the net value of the proprietor's equity. This is a simple concept, yet it has a very important bearing upon accounting technique. If a man had twenty-five dollars in his pocket and owed fifteen of it, he could say that he was worth ten dollars. In like manner, if a business has buildings, machinery, merchandise, cash, customers' accounts, etc., worth $100,000, and has outstanding liabilities of $60,000, the proprietors have a net worth in that business of $40,000.

The original proprietorship or net worth in any business is the amount which the proprietors invest when the business is organized. Changes in the amount of proprietorship may come about from a number of causes. Additional investments may be made, sums may be withdrawn by the proprietor, profits may be added to his investment, or losses subtracted. These are the principal causes for increases and decreases in proprietorship accounts.

Entries are made in these accounts on the same basis as those in the liability accounts. Increases are listed in the right column and decreases in the left. The illustration on page 28, for example, might represent the occurrences affecting the proprietorship account of the business of John Smith.

According to the entries made in this account, Mr. Smith invested cash in the business on June 1, to the amount of $15,000. On June 15, he placed an

additional amount of $2,000 in cash in the business. The profits earned on sales during the month, which constitutes a net addition to his proprietorship, amounted to $1,500. The total addition to his net worth in the business, therefore, was $18,500. There was deducted from his account $500 for withdrawal of funds, on June 20, and a loss of $200 resulting from the sale of some equipment at a price lower than cost. His net proprietorship at the end of the month was the difference between the two totals, or $17,800 This should be exactly equal to the difference between the sum of the balances in all asset accounts and the sum of the balances in all liability accounts, on the same date.

JOHN SMITH, PROPRIETOR

Decreases				*Increases*			
June	20	Withdrew cash personal expenses	$ 500.00	June	1	Invested cash	$15,000.00
	30	Loss on sale of equipment	200.00		15	Invested additional cash	2,000.00
	30	Balance	17,800.00		30	Profit on sales	1,500.00
			$18,500.00				$18,500.00

9. *Application of the terms "debit" and "credit."* —So far in this discussion, the two money columns in an account have been referred to as *left* and *right*. It would be possible to continue to use these expressions without becoming confused. In actual practice, however, the technical terms *debit* and *credit* are ap-

plied to these columns, respectively. The left side of every account is known as the *debit* side and the right side of the account is called the *credit* side. To place an entry on the left side of an account is to *debit* that account, and to place one on the right side is to *credit* the account. In modern accounting, there are no other meanings attached to these terms.

In learning the application of the technical terms, *debit* and *credit,* a person should become accustomed to using them to represent the appropriate sides of the accounts affected. Always think of *debit* as synonymous with *left,* and *credit* as meaning *right,* when applied to accounting records.

In earlier times, there were applications of the Latin meanings of the words in connection with personal accounts. The word *debit* is derived from a Latin word meaning "he owes." The word *credit* comes from the Latin for "he yields." In accounts with customers and creditors, these meanings of the words still have some significance. In all other accounts, however, the words have no other meaning than *left* and *right,* respectively.

10. *Rules for debiting and crediting accounts.*— Various rules have been developed as a guide for determining the particular debits and credits resulting from transactions. There is only one consistent rule, however, which applies to all transactions and to all accounts. This is based upon the nature of the increases and decreases in the accounts, as explained in the preceding paragraphs of this chapter. In

other words, it is necessary first to determine the accounts that are affected, that is, whether they are assets, liabilities, or net worth (proprietorship), and then whether the transaction has resulted in increases or decreases.

Every transaction must affect assets, liabilities, or net worth and it is possible that all three classes of accounts may be affected. Starting with debit balances in all asset accounts, it is clear that all increases must be debits and all decreases credits. Similarly, in liability and net worth accounts, since the balances are credits, all increases are entered on the credit side and decreases on the debit side. There is no other satisfactory rule to cover all cases except the one which applies the concept of increases and decreases to the three fundamental classes of accounts. The rule may be stated as follows: Asset accounts should be debited for increases and credited for decreases; liability and net worth accounts should be credited for increases and debited for decreases.

11. *Effect of increases and decreases.*—It is possible to set up in tabular form the rule for debit and credit, as stated. This table gives the relationship that exists between the terms debit and credit, and the increases and decreases in the various classes of accounts.

Debits represent:	*Credits* represent:
Increases in assets	Decreases in assets
Decreases in liabilities	Increases in liabilities
Decreases in net worth	Increases in net worth

In analyzing transactions, the following steps should be taken in conformity with the rule:

(a) Determine the accounts affected by the transaction.
(b) Determine the effect on each account, i.e., increase or decrease.
(c) Apply the appropriate designation in the account, i.e., debit or credit.

As an illustration, we may assume that a firm has purchased some equipment for $500, for which a cash payment is made. It is clear that an asset item, Cash, has decreased by $500. A credit of the amount should be made, therefore, in the Cash account. At the same time, another asset item, Equipment, has increased by $500. This means that a debit entry should be made in the Equipment account.

In the transaction illustrated, two accounts were affected and two entries were made, equal in amount, one on the debit side and one on the credit side. In the double entry system of accounts, the sum of the debit entries is *always* equal to the sum of the credit entries. At least two accounts are involved in every transaction. In the next chapter, the reasons for this constant equality of debits and credits will be explained.

REVIEW

Explain what is meant by an account.
Explain why an account is arranged in parallel columns.
Name the three broad classes of accounting data.
Show how liability accounts differ from asset accounts.
Explain the meaning of the terms "asset," "net worth."
What is the rule for debiting and crediting accounts?

CHAPTER III

SINGLE AND DOUBLE ENTRY SYSTEMS CONTRASTED

1. *Double entry system used more extensively.*— There are two systems of accounting in current use. These are known as the double entry and the single entry systems. In modern accounting, it is the former that holds the more important position, although the latter is much older. There are only a few business concerns that still adhere to the single entry method of keeping their accounting records. Some of the small partnerships and sole proprietorship enterprises are able to secure the data they desire with the single entry system, but there are relatively few that have failed to be converted to the newer method.

Anyone interested in accounting should be acquainted with the essentials of both systems. It is the purpose of this chapter to explain briefly the features which distinguish one from the other. In view of the fact that single entry is the older, one would naturally expect that system to be discussed first. It happens, however, that the double entry system is the more complete and is based upon a body of principles that may be readily explained in terms of

business transactions. The methods of the single entry system will be grasped more easily after the principles of the double entry are understood.

2. *Double entry system based upon equation.*— The rules for debit and credit were developed, in the preceding chapter, in terms of three fundamental classes of accounts; namely, assets, liabilities, and net worth. The double entry system is based upon this classification of accounts. If all the data pertaining to each of these classes are available, it is clear that a statement of financial condition could be prepared. The total assets of a concern constitute the source from which all obligations must be met. The difference at any time between the total assets and the total outstanding liabilities represents the net worth of the proprietors in the enterprise. If, for example, a firm has assets valued at $200,000, and has incurred obligations for future payment amounting to $75,000, the proprietors have a net equity or net worth in the enterprise amounting to $125,000. The result is obtained in this way:

All assets in the possession of the business	$200,000
Less all liabilities of the business	75,000
Equals the proprietor's net worth	$125,000

This can be stated in the form of an equation as follows:

Assets—Liabilities=Net Worth

It may be difficult at times to obtain all of the data necessary to place monetary values upon all the items

in the equation, but once the information is obtained for the value of the assets and amount of liabilities, the third term in the equation can be obtained by direct subtraction.

The equation may be changed, without altering the significance of any item, to read as follows:

Assets=Liabilities+Net Worth

In the illustration given above, this would be: Assets, $200,000 = Liabilities, $75,000 + Net Worth, $125,000. In this form, all of the assets are listed as a group on one side of the equation, and are opposed by the total of all liabilities and net worth on the other. If we assume certain values for the different assets and liabilities, the statement might appear as follows:

BALANCE SHEET

Assets		*Liabilities*	
Cash	$ 5,000.00	Notes Payable	$ 15,000.00
Accounts Receivable	30,000.00	Accounts Payable	20,000.00
Inventories	60,000.00	Mortgage Payable	40,000.00
Equipment	45,000.00		
Real Estate and Buildings	60,000.00	Total Liabilities	$ 75,000.00
		Net Worth of Proprietor	125,000.00
	$200,000.00		$200,000.00

This is the conventional form of balance sheet. It is the basis for all the accounting records under the double entry system.

3. *Form of the balance sheet.*—It will be noticed that the balance sheet is very similar in form to the

accounts described in the preceding chapter. There are two monetary columns, with the assets listed on the left and the liabilities and net worth on the right. The asset items appear in the asset accounts on the same side of the balance sheet as the balances. The cash item, for example, is listed on the left side of the balance sheet. Likewise, in the cash account, the balance always appears on the left. Similarly, the notes payable item is on the right side and the balance of the Notes Payable account always is on the right. In other words, there is an account for every item that appears in the balance sheet and the balance is on the same side of the account.

In the illustration given above, there are five asset items. There would be, in the books of that concern, five asset accounts with *debit* balances of the same amounts as shown on the balance sheet. There are three liability items and there would be three liability accounts with *credit* balances equal to those listed. Similarly, there is one net worth item and this would require an account entitled, Net Worth, having a *credit* equal to the amount appearing in the balance sheet. The balance sheet is, in truth, a table of account balances on the date for which the tabulation is made.

4. *The balance sheet is the origin of accounts.*—It has been shown that the totals of the two sides of a balance sheet are equal. Furthermore, it has been shown that there are accounts on the books of an enterprise in which the appropriate balances appear

exactly the same in amount as those under the same titles on the balance sheet. It follows from this that the total *debit* balances must be equal to the total *credit* balances in accounts at the time the balance sheet is prepared. This condition of equality is fundamental to the double entry system. If the accounts are accurately kept, the totals of all debits and credits are equal at all times.

A balance sheet could be prepared for a concern that had no organized system of records, if the information were available from other sources. It would be possible, for example, for a man who had never kept any accounts to take a careful inventory of everything he had and to list all of his outstanding liabilities. Having done this, he would be able to determine his net worth merely by subtracting the total liabilities from the total assets. He would then have a balance sheet. If, subsequently, he should decide to keep a set of books on the double entry system, it would be necessary for him to open accounts for each of the items on his balance sheet, placing the asset balances on the debit side and the liability and net worth balances on the credit side of the appropriate accounts. Thus it may be seen that the balance sheet is, in a very real sense, the origin of the accounts.

If every change in the amount of a balance sheet item is recorded on the proper side of the account affected, the accounts will represent the true condition for the preparation of a balance sheet at any

time. The balance of each account, under these circumstances, will be the appropriate amount to place upon the balance sheet.

There are some difficulties encountered in maintaining this ideal condition. These will be discussed in some detail in later chapters. For the present, in developing the principles of the system, it will be assumed that it is possible to record every change as it occurs. Under these conditions, it may readily be seen that a balance sheet is the aim of all accounting entries. In other words the balance sheet is both the starting point and the stopping point of accounts.

5. *Two or more accounts affected by every transaction.*—Every business transaction or other occurrence that causes a change in the monetary value of the item is recorded according to the rules for debiting and crediting accounts. If this rule is adhered to in all cases, it will be necessary, every time an entry is made in one account, to make an entry equal in amount, on the opposite side of another account. It may be, of course, that more than one other account will be affected, but the total of the entries in the offsetting accounts will, of necessity, be equal to the entry in the first account. In other words, there will always be debit and credit entries equal in amount for every transaction that is recognized in the accounts.

The rule that, for every recorded transaction, the debit entries must equal the credit entries is based upon the necessity of maintaining at all times the fundamental equation:

Assets=Liabilities+Net Worth

It is impossible to change any one item in the above equation without destroying the equation. If one asset item is decreased, for example, it must follow that (a) another asset is increased by an equal amount, or (b) a liability is decreased, or (c) net worth is decreased, or (d) a combination of changes takes place in which two or more of the items mentioned are involved. The decrease in the asset first mentioned would be recognized by a credit entry and the offsetting item would require a debit entry in the appropriate account.

6. *Classification of transactions.*—It is not always an easy matter to determine just which accounts should be debited and which credited for transactions. If the fundamental equation is to be maintained, it is necessary, in every case, to make sure that the entries be equal in amount on opposite sides of some accounts. The process of selecting the accounts affected may be greatly simplified by the use of a list classifying all possible transactions in general terms. In the list that follows, the various possible changes in the three classes of accounts resulting from business transactions or other occurrences are given in parallel columns.

This list carries every possible type of transaction. There may be combinations of items on either one or on both sides, but there can be no relationships other than those listed. It is almost always possible

	If	*Then*
(1)	One asset increases	Another asset may decrease
(2)	An asset increases	A liability may increase
(3)	An asset increases	A net worth item may increase
(4)	One asset decreases	Another asset may increase
(5)	An asset decreases	A liability may decrease
(6)	An asset decreases	A net worth item may decrease
(7)	A liability increases	An asset may increase
(8)	One liability increases	Another liability may decrease
(9)	A liability increases	A net worth item may decrease
(10)	One liability decreases	Another liability may increase
(11)	A liability decreases	An asset may decrease
(12)	A liability decreases	A net worth item may increase
(13)	One net worth item increases	Another net worth item may decrease
(14)	A net worth item increases	An asset may increase
(15)	A net worth item increases	A liability may decrease
(16)	One net worth item decreases	Another net worth item may decrease
(17)	A net worth item decreases	An asset may decrease
(18)	A net worth item decreases	A liability may increase

to recognize immediately the effect of a transaction on one account. The search for the other account affected can be facilitated by referring to the possible combinations in this list. An analysis of the trans-

action in terms of these possibilities will disclose the accounts affected.

7. *Examples of classifying transactions.*—Suppose that a firm purchased a bill of goods at an invoice price of $500, paying $100 in cash and agreeing to pay the balance in sixty days. It is clear that one asset (merchandise) has increased by $500. The first three lines in the list show the possibilities covering the increase in an asset. No. 1 shows a possible decrease in another asset and No. 2 an increase in a liability. Both of these conditions are found in this transaction, for cash decreased by $100 and creditors' accounts increased by $400. It will be necessary, therefore, to debit the Merchandise account for $500, to credit the Cash account for $100, and to credit the Accounts Payable account for $400. The total debits and credits for the transaction are equal.

A sale of merchandise at a profit presents a different case. Suppose, for example, that merchandise costing $300 was sold for cash at a price of $400. It is clear that the asset item, cash, is increased by $400. There has been no increase in liabilities, so the conditions in line No. 3 are not present. The only remaining possibility is for an increase in net worth. A profit accrues to the benefit of the proprietors; therefore, net worth has increased by $100. The complete set of entries calls for a debit of $400 to the Cash account, a credit of $300 to Merchandise, and a credit of $100 to Net Worth.

The rent of the building, one of the expenses of

running the business, is paid in cash. There is a decrease in the asset item, cash. What other account is affected? No other asset item has increased and no liability account has decreased; therefore, there must have been a decrease in a net worth account. This transaction calls for a debit to a net worth account and a credit to cash.

It is possible to analyze every type of transaction in this same way. These examples are sufficient, for the present, to show how the equality of debits and credits is maintained in the double entry system. In Chapter IV, a more complete analysis of transactions will be given.

8. *Single entry bookkeeping.*—We may now consider the essential features of the single entry system of keeping records. This method of bookkeeping is, as the name implies, a system that does not require two entries for each transaction. For most of the ordinary transactions only one book entry is made. In the older systems, accounts are kept for customers and creditors only. If goods are sold on credit, the customer's account is charged, but no opposing entry is made. When the customer pays, his account is credited without an opposing entry being made, although the bank account, if properly kept, serves as a cash account. Similarly, when goods are purchased on credit, only the creditor's account is credited. When the bill is paid, the creditor's account is debited.

In most of the systems of single entry bookkeep-

ing, only the accounts of customers and creditors are kept. There are no records maintained to represent other forms of assets, such as merchandise, buildings, etc., or the net worth of the proprietors. Entries are made in the customers' and creditors' accounts, however, on the same basis as they are made in the double entry system.

Occasionally, in the single entry system as maintained today, statistical accounts are kept for the purpose of giving specialized detailed information. Thus, there are some systems in which cash accounts, expense accounts, and even merchandise accounts, are kept. In no case, however, is an effort made to maintain a complete set of records covering all of the items affecting the finances of the concern.

9. *Purposes and limitations of single entry bookkeeping.*—The single entry system is kept primarily for the purpose of maintaining a continuous record of financial relations with customers and creditors. Information as to other factors in the business must be obtained from sources other than the books. This method is adaptable to small business enterprises and particularly to the sole proprietorship type.

When applied to larger enterprises, the limitations of the single entry system are at once apparent. For one thing, one is impressed by the lack of information that this method provides. Furthermore, it does not provide a means of checking the clerical accuracy of the bookkeeper's work. In the double entry system it is possible, at any time, to check the rec-

ords, merely by totaling the debit and credit entries in all accounts. These factors render the single entry system practically obsolete in modern large-scale business accounting.

10. *Preparation of balance sheet in single entry system.*—Although it is rather inconvenient, it is possible to prepare financial statements for concerns using the single entry system. The balance sheet may be prepared at any time by taking a complete inventory. The amount of one class of assets, namely, the accounts receivable, may be determined by adding the balances in the customers' accounts. The value of all the other assets must be ascertained by the detailed process of the inventory. Once the value of the assets is known, it is possible to compute the net worth by subtracting the amount of the liabilities, as shown in the creditors' accounts, from the total of the assets. This is a cumbersome method, to say the least, particularly in a business that operates with a large capital investment. Furthermore, there are a great many opportunities for inaccuracies. There is no assurance that all of the items which properly belong in the statement have been included.

11. *Converting system from single to double entry.*—A firm that has kept its books by the single entry method may desire to change over to the double entry system. This can be done without interfering with the accounts already in the books. The customers' and creditors' accounts are kept under the double entry system in exactly the same way as before. It

is necessary simply to add the other asset and liability and the net worth accounts that have not been a part of the single entry system.

The first step is to prepare a balance sheet by the method suggested in the preceding section. As the second step, an account should be opened for each of the items in the balance sheet for which accounts are not already in the books. After this has been done, the books are said to be "in balance"; that is, the total debit balances equal the total credit balances. From that point on, the books may be kept in accordance with the rules for the double entry system.

12. *Summary.*—From the discussion thus far, it may be seen that the single entry system may be considered as an incomplete method of keeping records. The double entry system contains all of the financial information required, whereas the single entry system contains only a part of it. The discussion throughout the remainder of the text is devoted exclusively to the double entry system. If a person becomes familiar with the methods and practices of this system, he will have little difficulty in understanding how the single entry system operates.

REVIEW

State the basis of the double entry system of keeping books.

Prepare a balance sheet statement, using assumed figures for the several items.

If you were called upon to prepare a simple balance sheet for a concern, how would you proceed? Assume that the concern had no book records.

Explain why two or more accounts must be affected by every transaction in the double entry system.

Prepare an illustration of a transaction for each of the possible changes in accounts in the table in Section 6 of this chapter.

How would you proceed to prepare a balance sheet from a single entry system?

Explain the process of converting the bookkeeping system from single to double entry.

CHAPTER IV

ANALYSIS OF BUSINESS TRANSACTIONS

1. *Identifying changes in financial condition.*— The accounts of a concern are kept primarily for the purposes of recording the changes in the financial condition and of determining the causes of such changes. The most important interest in the business is that of the proprietor, and it is in the net worth accounts that the extent of the gains or losses in financial solvency are measured. If the records indicate a constantly growing balance in net worth, the condition of the enterprise is considered to be improving. If, on the other hand, the balance shows a tendency to decrease, the solvency of the concern becomes endangered. All of the efforts of management are directed toward the problem of increasing the margin of safety as shown by the net worth accounts.

When a business is first started, the proprietor owns all the assets, unless he has incurred some liabilities in the opening transaction. All subsequent business transactions are incurred with the intention of realizing some benefit that will be reflected in an increase in his proprietary interest. Assets are acquired and disposed of, liabilities are incurred and

paid off at maturity, services are purchased, and products of the concern are sold. The various transactions may be very simple or extremely complicated, but in every case the ultimate objective is profit.

In recording the transactions in the accounts, certain technical rules must be followed if the financial facts are to be obtained in an orderly manner. In the preceding chapter, all of the possible types of transactions were listed in a table. There are eighteen lines in this table, each one indicating a possible combination of changes in accounts as the result of transactions. These can be summarized for convenience into a group of six changes, as follows:

(1) Increase in some asset
(2) Decrease in some asset
(3) Increase in some liability
(4) Decrease in some liability
(5) Increase in net worth
(6) Decrease in net worth

Two or more of these six changes occur as the result of every transaction. We may now examine some of the typical transactions that commonly occur in business, for the purpose of establishing more clearly the principles underlying the accounting process.

2. *Effect of business transactions.*—The various business transactions, or exchanges, of an ordinary undertaking, result in changes in the character or quantity of the assets, liabilities, or net worth. There are at least two parties to every business transaction

—the firm whose books are being kept and another party. The other party may be one from whom goods or services are purchased, or one to whom the firm's own finished products are sold, or it may be one from whom funds are borrowed. The number of possible relationships is unlimited, and the reasons for the exchanges are varied, but the results of the transactions in every instance affect the balance sheet items of assets, liabilities, or net worth in some way. It is the function of the accountant to analyze each transaction, or type of transaction, to determine its effect upon the account classification.

3. *Transactions viewed as an exchange of values.* —From the accounting viewpoint, business transactions are essentially a series of exchanges that may be expressed in terms of money. The function of bookkeeping is to record the effects of all such exchanges or transactions in terms of money.

Every business transaction is an exchange of values between a giver and a receiver. Outside of possible exchanges between coin collectors and foreign currency brokers, there would be no advantage in an exchange of cash for cash. Consequently, the first requisite of an exchange is that two or more different elements shall be involved and that the exchange shall be equal, or shall be made equal, in the eyes of each participant, by the introduction of a sufficient cash consideration, or its equivalent. The fact that the cash payment may be deferred until a later date, and is temporarily repre-

sented by an obligation to pay, does not disturb, in any way, the equality of the exchange, provided the one recipient is satisfied to accept the other's promise to pay in the future.

It would be impossible to list all of the various types of business transactions, but those that occur most frequently may be classified as follows:

(a) An exchange of merchandise for cash
(b) An exchange of merchandise for obligations to pay in the future
(c) An exchange of services for cash
(d) An exchange of services for merchandise
(e) An exchange of services for obligations to pay in the future
(f) An exchange of cash for obligations to pay in the future

In each of these cases, the exchanges are made in terms of equal values.

4. *Two phases of business transactions.*—There are two phases to every transaction. First, there is the fixing of the valuation upon the commodity or service which a business concern delivers, and, second, there is the valuation upon the particular things it receives. The merchant, for example, establishes a price at which he expects to sell his goods. This figure is seldom, if ever, the cost of the goods to him, but it is one which will reimburse him for the cost and leave him something over as a profit. The element of profit is realized to cover the particular service which he performs in fulfilling his function as a merchant. In this case, he delivers merchandise equal

to the cost price, plus his services, and receives in exchange cash equal to the sum of the two. The purchaser of the merchandise receives goods equal in value to the selling price and disposes of cash, or its equivalent, in exchange.

The purchase and sale of goods at a profit cause some difficulties of interpretation from the accounting standpoint. A firm sells a bill of goods for $150 that cost $100. Can it be said that there has been an exchange of equal values? Evidently both parties to the deal are content with the valuation of $150 or the transaction would not have occurred. The seller, in analyzing the transaction, recognizes a decrease in his merchandise of only $100, whereas his cash increases by $150. The $50 difference he calls profit and adds that amount to his net worth. He is able to add a certain amount to the cost of his merchandise, in fixing selling prices, because he contributes some service in the merchandising of the goods for which the buyer is willing to pay. It is true, therefore, that even in cases of this sort there is an exchange in which the values are equal.

5. *Property rights.*—The exchange of values referred to in Section 3 of this chapter consists of exchanges of property or property rights. The value of property is, in fact, dependent upon the right to use and enjoy the particular kind of goods or services in question. We are accustomed to think of property as being something tangible in itself. Thus, a building, a machine, or a stock of goods is known as

property, and the fact that they are tangible things appears to give them value. It is not the physical presence of the items that gives them value, however. If it were not possible to make some use of them, or to exchange them for something else, they would be of no value and therefore would have no accounting significance.

A street car company, for example, might have some old horse cars in its barns in as good a condition as they were in the days when such vehicles were used. Today, they are neither useful nor able to command other things in exchange. They are not valuable property in the accounting sense. The same company might have a franchise to use certain streets for its lines, that enables it to earn substantial profits. This would be a property right of considerable value.

The asset items with which accounting records are concerned need not be tangible, physical things. The right to collect money from other concerns, the right to employ patents, to receive the profits and monopolies granted by trademarks, franchises, etc., are just as truly property rights as is the possession of cash, machinery, desks, goods, etc. This is of significance in accounting for all transactions in which nonphysical items are either received or disposed of. If business concerns did not recognize intangible items as assets, there would be very few really solvent firms. There are many cases in which the intangible assets such as goodwill, patents, etc., are the most valuable assets owned.

6. *Valuable property rights are assets.*—The assets of a concern are made up of the properties and property rights in its possession. In the preceding section, emphasis was placed upon the fact that these items need not have physical existence to be of accounting significance. It is essential, however, that any item should be valuable to the owner if it is to be treated in the accounts as an asset.

Rights may be valuable even though there is no opportunity for immediate use or disposal of the properties which they represent. There are a great many forms of assets in which the owner obtains financial rewards merely by waiting. Contracts that call for payments in the future are assets, even though the payments will not be made for a long time. Bonds constitute claims for payment at a future date. The obligation of the debtor corporation to make the payment in the future is a valuable right to the owner of the bond.

A patent right is valuable to an enterprise, not because there is a prospect of selling it, but because the possession of the right gives the owner a privilege to manufacture certain things which can be sold at a profit. It might be assumed that the cost of a patent is gradually exchanged for cash in the sale of the products protected during its useful life.

It is not always an easy matter to determine just how valuable a property right may be for accounting purposes. An asset may be worth all of its cost or only a part of the purchase price. It is one of the

functions of the accountant to determine the extent to which valuations may be placed upon all properties and property rights in the possession of a concern. His decisions on these matters are reflected in the financial statement showing the condition of a concern.

Some of the problems involved in this phase of accounting will be discussed in later chapters. At this point, we are concerned only with the nature of property rights from the accounting standpoint. We can be sure that any item, whether tangible or intangible, may be considered as an asset, if it has value to the concern.

7. *Classification of assets.*—It would be possible to group all assets owned by a business under one heading. In actual practice this is never done, however, for reasons that are quite apparent. The executive should know the total of all assets, that would be shown in such a summary, but he should have, in addition, the facts concerning the different types of assets owned. Some suggestions have been made as to the titles of asset accounts in the illustrative balance sheet in Chapter III. The executive of such a business needs to know something about the amount of capital tied up in merchandise being held for sale, the amount outstanding in customers' accounts, and the amount of cash on hand available for meeting immediate demands. Additional accounts would be necessary to keep the executive informed as to all the facts affecting the financial policy of the concern.

To provide this information, a record of each separate and distinct class of assets is maintained in the accounting system. In the course of business operations, there is a constant shifting in the amounts tied up in different forms of assets. Some of the funds are placed in permanent property items, some in materials and merchandise, and some are kept in cash balances to meet payrolls and other expenses. As new funds come into the business from the sale of its product, or from new investments or loans from banks, the executives put them into some form of productive property.

In a well-managed business, there are certain established standards as to the amounts that should be invested in various types of assets. A certain proportion of the total capital of an enterprise reasonably may be apportioned to buildings and machinery. A certain amount should be kept in the form of liquid assets—cash and readily salable merchandise. If a firm ignores these standards and invests too large a proportion of its funds in fixed assets, it may find itself in bankruptcy, even though its assets, valued on a conservative basis, are greatly in excess of its liabilities. A separate account title should be maintained for every type of asset for which standards of financial management have been established.

8. *Classification of liabilities.*—As far as bookkeeping records are concerned, obligations to pay money arise through the receipt of assets in one form or another. A promise to pay at some future date

is exchanged for the assets received. The right to the property acquired becomes the asset of the purchaser and may be disposed of as he sees fit, except for certain limitations in some cases. He must, however, voluntarily comply with his agreement to pay, or he will be compelled to do so by action in a court of law. A liability is, therefore, a right of action at law by another against the property of the one who assumes the obligation, or who becomes liable under an oral or written promise to pay.

One important basis for the classification is the length of time involved in the promise of deferred payment. For ordinary merchandising transactions, the payment is arranged for early settlement—ten days, thirty days, or sixty days, depending on the custom in the trade. Loans made for the construction of buildings or purchase of equipment, on the other hand, may call for ultimate payment a number of years in the future. Twenty, fifty, and even one-hundred-year bonds are frequently issued.

The terms of settlement, expressed in length of time before the payment must be made, are important in determining the uses to which the funds or assets covered by the loan may be put. If the loan calls for settlement in sixty days, it is obvious that the funds should not be invested in buildings or machinery which cannot be converted into cash, through sale, for a period of years. It is entirely proper, however, to invest the funds obtained from a long-term loan in fixed assets.

In order that proper comparisons may be made with the different classes of assets, the liabilities should be classified into groups on the basis of the time element. Assets that can be readily converted into cash may then be compared with the liabilities that will be maturing currently. Fixed assets may also be compared with long-term debts.

9. *Security for liabilities.*—A second basis for the classification of liabilities is the security pledged for the loan. Most of the short-term liabilities, such as open-book creditors' accounts and promissory notes, are unsecured. That is, the creditor does not have a claim upon any specific piece of property pending settlement of the loan.

A promise to pay, when unsecured by specific property of the debtor, is an enforcible right belonging to the creditor. His interest is no longer in the merchandise or other property delivered by him in exchange for the promise to pay, but rather in the purchaser's ability to redeem his promise at maturity. For example, a merchant purchases $5,000 worth of merchandise upon his promise to pay thirty days from date. At the expiration of thirty days, he may not have sold any of the merchandise acquired in this particular exchange. The creditor, in that case, looks not to the return of the merchandise but expects payment from the funds obtained from the sale of other merchandise.

Some liabilities involve the pledging of certain specific pieces of property. Bonds, for example, are

often secured by mortgages on the real estate of the debtor. In case of default, either in interest or principal, the creditor has the right to foreclose the mortgage in order to secure payment. Sometimes money is borrowed on collateral loans, in which case some form of personal property is pledged as security.

In all cases where liabilities are secured by a pledge upon some of the assets of the concern, those property items are said to be encumbered. It is necessary, for purposes of comparison, to set up a classification of liabilities on the basis of the security involved. We have, then, two bases for the classification of liability accounts: (a) the term of the loans, and (b) the security for the loans.

10. *Net worth.*—The term "net worth" has been defined as the difference between total assets and total liabilities. In the case of a single-proprietor enterprise, this is carried in one account under the name of the proprietor. In a partnership, it is divided between the several proprietors' accounts in accordance with the terms of the copartnership agreement. The net worth of a corporation is vested in the stockholders, and special capital stock and surplus accounts are necessary to record the changes which occur in that item. The accounting methods for these three types of business organizations are rather complicated and require extended treatment. Chapter XIX is devoted exclusively to this subject. The nature of net worth is the same for the three types of business, however, and, for the purpose of

analyzing, business transactions may be treated without reference to the particular form of business organization.

Changes in net worth may result from two broad classes of transactions. First, there are those that result from investment and withdrawal of funds by the proprietors, and, second, there are the operating profits and losses that must be added to and subtracted from the net worth accounts. Transactions in the first group present very few problems of accounting analysis. Usually, there is simply a transfer of cash between the business and the proprietor. If more cash is invested, the Net Worth account is credited with the same amount as the debit to Cash; if there is a withdrawal of cash, the reverse of this entry is made.

In recording changes resulting from business operations, however, a number of problems in account classification arise. The Net Worth account is subdivided into a great many subaccounts. Thus, there are a number of profit or income accounts representing the component factors of increases in net worth, and a number of loss or expense factors tending to decrease the net worth.

11. *Internal transactions.*—In the analysis of transactions affecting the various classes of accounts, it has been assumed that there are two parties involved. This is a requisite of all business transactions. There cannot be an exchange unless there are two individuals—the giver and the receiver. There

are occasions, however, when entries must be made in the accounts, although no business transaction has occurred. A loss may be incurred, for example, where no outside party is involved. If a building burns down, it is clear that an asset which was formerly carried on the books in a Building account no longer exists. This account must be credited for the amount of the loss. Since there is no outside party with whom an exchange has been made, the debit will be made against a Net Worth account. The whole transaction is *within* the business. This is called an *internal* transaction to differentiate it from *business* transactions, in which persons outside of the business are concerned.

There are a great many types of internal transactions in ordinary accounting practices. Every adjustment in the accounts resulting from some happening in which an outside party is not involved is an internal transaction. The recognition of depreciation of buildings and machinery, losses due to price changes in merchandise, and the appreciation of assets are all cases in which book entries must be made. The particular entries to be made in each case can be determined from the rules for debiting and crediting accounts, as already explained.

In most of the internal transactions, that group of accounts called profit or income and loss or expense accounts are involved on one side. These are subdivisions of net worth, as explained in the preceding section.

REVIEW

Give an illustration of a common transaction in which the element of profit is involved. What accounts are affected?

Show how the value of an asset may be determined for accounting purposes.

Prepare a list of asset items for some business with which you are familiar.

State the bases for the classification of liabilities.

How do the net worth accounts differ in the accounts of a single proprietor, partnership, and corporation?

CHAPTER V

SIMPLE SET OF TRANSACTIONS

1. *Purpose of the illustration.*—Probably the most satisfactory way to fix firmly in one's mind the significance, from the accountant's point of view, of the various transactions that take place in ordinary business routine, is actually to perform the work of opening a set of books, entering the transactions as they occur, and closing the books at the end of the period. In this chapter, a series of transactions for a simple type of business is given and the appropriate entries are illustrated in a book of original entry.

The reader is advised to provide himself with a number of sheets of standard journal and ledger paper and to make the entries called for in the journalizing process, according to the instructions in the exercise. If one follows this procedure, in detail, he will become familiar with the practical accounting methods. It is important that each step in the process be thoroughly understood and this can be accomplished in no better way.

The set of transactions selected for this exercise is taken from the records of a hypothetical business concern. They are peculiar to the type of business represented, but the methods illustrated are adapt-

able to every line of business. The money amounts are purely hypothetical and are not necessarily representative of the prices which prevail at present in this business. It is the purpose of the illustration to show only the methods of accounting procedure.

2. *Books of original entry.*—In any system of records, it is necessary to arrange an orderly sequence of bookkeeping operations. It would be a cumbersome procedure, at best, to attempt to make entries directly in the accounts, without arranging the records of transactions in chronological order. Furthermore, it simplifies the whole process to place together, in the chronological list of transactions, the names of the accounts that will be affected by the debit and credit entries. This is done by maintaining a book of original entry in which the transactions are classified into their debit and credit elements. The book which will be used in this illustration is called the *journal* and the process of classifying and recording the transactions is called *journalizing*. In a modern accounting office, there are usually several books used for this purpose, and machines are employed in many places to simplify the process. The journalizing procedure is involved in all cases, however, and the journal form which we shall use is sufficient to illustrate this process.

There are usually a number of papers, such as letters of inquiry, purchase orders, vouchers, etc., that give evidence of the fact that a transaction has taken place. These papers find their way in due course to

the accounting department, where the recording process begins. The journal is the book in which the first official bookkeeping entry is made. In this illustration, we shall assume that the several evidences of transactions have been received and that it is our task to make the original entries.

3. *Nature of the enterprise.*—It will be assumed, in this case, that A. Roberts has decided to enter the wholesale and retail carpet business and has made an initial investment of $10,000 on January 2, 19—. The ensuing transactions for the month of January are listed below. These transactions are presented in summarized form, as all of the paper evidences have been properly filed. A list of transactions, such as is given here, is in the nature of a daybook or memorandum from which the journal entries are to be made.

4. *List of transactions for January.*—The following transactions were carried on in the month of January. The number preceding each group of transactions represents the date on which that group of transactions took place.

2.—A. Roberts begins a wholesale and retail carpet business in New York City, and invests cash in the amount of $10,000, which he deposits at the Central Bank. He rented a store and basement at 100 X Street on a five years' lease, at a yearly rental of $3,600, payable monthly in advance. He paid his rent for the month of January by check. He engaged a bookkeeper at a weekly salary of $40; a stenographer at $30; and a clerk at $20.

3.—He bought of King & Company, New York, on ac-

count, the following: 6 pieces Axminster, 1,109 yds. each, at $1.11 per yd.; 3 pieces Moquette, 887 yds. each, at $2.50 per yd.; 2 pieces Brussels, 915 yds. each, at $1.84½ per yd.; 2,000 yds. assorted Oilcloth, at $.38¼ per yd.; 3,000 yds. assorted Oilcloth, at $.33½ per yd.; 2,000 yds. assorted Linoleum, at $.97 per yd.

4.—He pays King & Company, $4,000 on account, and gives his three months' note, bearing 6% interest, for the balance. He insures store and contents with the Hanover Fire Insurance Co., for $15,000.00, and pays premium at 1 1/16%, by check.

5.—He pays by check to J. Walters, $500.00, viz., for sundry shelving, $150.00; furniture and fixtures, $350.00. Cash sales today were as follows: 26 yds. Moquette at $3.74 per yd.; 12 yds. Linoleum at $1.20 per yd.; 16 yds. Oilcloth at $.40½ per yd.

6.—Sold to Girard & Company, Buffalo, N. Y., the following: 150 yds. Axminster at $1.39 per yd.; 300 yds. Oilcloth at $.44¼ per yd.; terms 2/10, n/30.

7.—Sold to B. Eckert & Sons, New York, the following: 200 yds. Brussels at $2.44 per yd.; 500 yds. Oilcloth at $.44¼ per yd.; 300 yds. Linoleum at $1.13 per yd.; terms cash $400.00, balance due in 10 days. Cash sales today were as follows: 56 yds. Linoleum at $1.28 per yd.; 39 yds. Oilcloth at $.50 per yd. Paid weekly salaries in cash, $90.00.

9.—Bought for cash at auction, 1,000 yds. Oilcloth at 28¢ per yd.; 1,000 yds. Linoleum at 80¢ per yd. Withdrew for private use, $100.00.

10.—Girard & Company remit for bill of the 6th inst., by check. Sold to the Eastern Rug & Carpet Company, for cash, the oilcloth and linoleum bought at auction yesterday, at 10% profit.

11.—Cash sales today were as follows: 26 yds. Axminster at $1.60 per yd.; 40 yds. Moquette at $3.50 per yd.; 18 yds. Brussels at $2.80 per yd.; 48 yds. Linoleum at $1.08 per yd.

12.—Bought of Hooker & Sons, New York, the follow-

ing: 1,500 yds. Wilton at $4.50 per yd.; terms 5/10, 2/30. Sold M. Phillips, Buffalo, N. Y., the following: 350 yds. Wilton at $5.70 per yd.; 250 yds. Brussels at $2.10 per yd.; 1,000 yds. Oilcloth at $.38¼ per yd.; terms 2/10.

13.—B. Eckert & Sons remit balance due. Cash sales today were as follows: 22 yds. Brussels at $2.80 per yd.; 52 yds. Linoleum at $1.08 per yd. Paid for sundry advertising, by check, $59.00. Paid cash for sundry petty expenses, $24.78.

14.—Sold to William Johnson & Bro., Troy, N. Y. the following: 1,000 yds. Axminster at $1.29½ per yd.; 500 yds. Wilton at $5.70 per yd.; 600 yds. Moquette at $3.00 per yd.; received, in payment, check for $1,000.00 and their 30-day note for $2,000.00, balance due in 20 days. Paid salaries in cash, $90.00. Paid for freight and deliveries on sales, $44.32, in cash.

16.—Hired another clerk at $20 per week. Have discounted William Johnson & Bro.'s note at the bank and had proceeds, less 6% discount per annum for unexpired time. Paid Hooker & Sons' invoice of the 12th inst. Cash sales today were 89 yds. Oilcloth at $.42 per yd.

18.—Sold B. Eckert & Sons the following: 250 yds. Wilton at $5.70 per yd.; 250 yds. Brussels at $2.10 per yd.; terms 2/10, n/30. Sold Foster Bros., New York, the following: 350 yds. Axminster at $1.31 per yd.; 300 yds. Moquette at $3.00 per yd.; 500 yds. Oilcloth at $.39 per yd.; received, in payment, check for $600.00, balance due in 30 days.

19.—Bought of F. Jacobs & Sons, City, the following: 1,000 yds. Wilton at $4.45 per yd.; 1,000 yds. Oilcloth at $.33 per yd.; 1,000 yds. Linoleum at $.95 per yd.; terms 3/10, n/60. Cash sales today were as follows: 112 yds. Axminster at $1.60 per yd.; 38 yds. Brussels at $2.90 per yd.; 62 yds. Oilcloth at $.42 per yd.

20.—Have this day discounted at the bank our 60-day note for $4,000.00, and had proceeds, less 6% discount per annum, placed to my credit. By special arrangement, F. Jacobs & Sons allowed us 5% instead of 3% discount for

prepaying, today, invoice of the 19th inst. Paid by check for sundry printing matter, $42.60; for advertising, $57.00. Paid sundry petty expenses, $23.70, in cash.

21.—Cash sales today were as follows: 63 yds. Axminster at $1.60 per yd.; 42 yds. Brussels at $2.80 per yd.; 86 yds. Oilcloth at $.42 per yd.; 52 yds. Linoleum at $1.28 per yd. Withdrew for private use, $200.00. Paid salaries, in cash, $110.00; sundry postage, $5.90; sundry petty expenses, $3.74.

23.—Sold to R. Roberts, City: 500 yds. Wilton at $5.60 per yd.; 500 yds. Linoleum at $1.20 per yd.; received, in payment, check for $1,000.00, balance due in 10 days. Paid to A. Simpson 5% commission on sale to Roberts, by check.

25.—Sold to James Farcott & Co., Troy, N. Y., the following: 500 yds. Wilton at $5.60 per yd.; 500 yds. Linoleum at $1.20 per yd.; 500 yds. Oilcloth at $.38 per yd.; terms 2/10, n/30. Paid freight, $37.30 in cash.

26.—Paid to A. Simpson 5% commission on sale to Farcott & Co., January 25. Cash sales today were as follows: 125 yds. Oilcloth at $.42 per yd.; 42 yds. Brussels at $2.90 per yd. Paid in cash sundry petty expenses, $3.30.

27.—Bought of King & Company the following: 2,000 yds. Linoleum at $.96 per yd.; 1,000 yds. Brussels at $1.84 per yd.; 2,000 yds. Oilcloth at $.38 per yd.; gave, in payment, check for $2,000.00 and 30-day note for the balance.

28.—Paid salaries, $120; sundry office expenses, $5.92, in cash.

30.—Sold to Brott & Co., Albany, N. Y., the following: 300 yds. Brussels at $2.30 per yd.; 500 yds. Linoleum at $1.20 per yd.; 500 yds. Oilcloth at $.38 per yd.; received, in payment, check for $600.00 and their 30-day note, with 6% interest, for balance. Cash sales today were 25 yds. Brussels at $2.90 per yd.

31.—James Farcott & Co. remitted for bill of the 25th inst., by check. Sold to F. Peters & Bro., City, the following: 300 yds. Oilcloth at $.45 per yd.; 200 yds. Linoleum at $1.30 per yd.; terms 2/10, n/30. Cash sales today were

as follows: 92 yds. Linoleum at $1.26 per yd.; 57 yds. Moquette at $3.70 per yd.; 86 yds. Oilcloth at $.43 per yd.

5. *Journal form.*—We are now ready to classify the transactions into their debit and credit elements. As soon as it has been determined which accounts are affected, appropriate entries are made in the journal. Journal entries are made in a book with pages ruled as follows:

JOURNAL

	Ledger Folio	Debit	Credit
January 19—.			
2.			
Cash	2	$10,000 00	
A. Roberts—Net Worth	1		$10,000 00
Invested $10,000.00 in cash, deposited at the Central Bank.			

There are three columns at the right of the page. The first one is headed *Ledger Folio.* This column is used to designate the page on which the account title, appearing on the same line, will be found in the ledger. The last two columns are headed *Debit* and *Credit,* respectively. These are used to distinguish the amounts to be debited from those to be credited to the account titles, which appear at the left on the same lines. The column headings for the last two

columns are usually omitted and the heading for the first column is abbreviated "L.F."

The first transaction for the month of January has been journalized in the above form. It will be noted that the account to be debited, Cash, appears first, and the amount, $10,000, is placed in the debit column. The account to be credited, A. Roberts—Net Worth, is placed on the next line, with a slight indentation, and the amount is placed in the credit column. Just below the account titles, there is a brief description of the transaction which gave rise to the entry. The figure "2" appearing on the line above the cash item refers to the date on which the transaction took place. This is a complete journalization of that transaction.

6. *Journalizing January transactions.*—In making the proper journal entries, it is necessary to keep in mind the rules for debiting and crediting accounts. Since this is a new enterprise, there are no accounts in the ledger to start with. It will be necessary to determine the account titles to be used in connection with each transaction as it is analyzed. All of the transactions for January, as listed in the form on page 67, are properly journalized in the model form of journal shown on pages 69, 70, 71, 72, 73 and 74.

7. *Analysis of transactions.*—The first transaction covering the original investment calls for the journal entries, as explained in Section 5; a debit to Cash and a credit to A. Roberts' Net Worth account. The payment of $300 for one month's rent in advance re-

JOURNAL

	L. F.	Debit	Credit
January, 19—.			
2.			
Cash	2	$10,000 00	
A. Roberts—Net Worth	1		$10,000 00
Invested $10,000.00 in cash, deposited at the Central Bank.			
Rent	48	300 00	
Cash	2		300 00
Rented the store and basement at 100 X Street on a five-year lease, at a yearly rental of $3,600.00, payable monthly in advance.			
3.			
Merchandise	30	21,124 79	
King & Company	72		21,124 79
Purchased goods as per invoice.			
4.			
King & Company	72	21,124 79	
Cash	2		4,000 00
Notes Payable	31		17,124 79
Paid cash on account and gave 90-day note, 6% interest, for balance.			
Insurance	49	159 38	
Cash	2		159 38
Paid for insurance on store and contents.			
5.			
Furniture & Fixtures	5	500 00	
Cash	2		500 00
Purchased fixtures from J. Walters.			
Cash	2	118 12	
Sales	35		118 12
Cash sales for the day.			
6.			
Girard & Co.	60	341 25	
Sales	35		341 25
Sold on account bill of goods to Girard & Co., Buffalo, N. Y.			

JOURNAL

	L. F.	Debit	Credit
7.			
Cash	2	$ 400 00	
B. Eckert & Sons	61	648 25	
Sales	35		$ 1,048 25
Sold goods as per invoice, $400.00 cash and balance on account.			
Cash	2	91 18	
Sales	35		91 18
Cash sales for the day.			
Office Salaries	43	90 00	
Cash	2		90 00
Salaries for week ending 7th.			
9.			
Merchandise	30	1,080 00	
Cash	2		1,080 00
Purchased goods at auction.			
A. Roberts—Drawing Account	1	100 00	
Cash	2		100 00
Withdrew cash for personal use.			
10.			
Cash	2	334 42	
Discount on Sales	39	6 83	
Girard & Co.	60		341 25
Remittance for bill of 6th. inst., less 2% discount.			
Cash	2	1,188 00	
Sales	35		1,188 00
Sold goods purchased at auction to Eastern Rug & Carpet Co.			
11.			
Cash	2	283 84	
Sales	35		283 84
Cash sales for the day.			
12.			
Merchandise	30	6,750 00	
Hooker & Sons	73		6,750 00
Purchases goods as per invoice; terms 5/10, 2/30.			
M. Phillips	65	2,902 50	
Sales	35		2,902 50
Sold on account; terms 2/10.			

JOURNAL

	L. F.	Debit	Credit
13.			
Cash	2	$ 648 25	
B. Eckert & Sons	61		$ 648 25
Received balance on account.			
Cash	2	117 76	
Sales	35		117 76
Cash sales for the day.			
Advertising	44	59 00	
General Expense	45	24 78	
Cash	2		83 78
Paid advertising and sundry expenses.			
14.			
Cash	2	1,000 00	
Notes Receivable	25	2,000 00	
William Johnson & Bro.	66	2,945 00	
Sales	35		5,945 00
Sold goods as per invoice; terms $1,000.00 cash, $2,000.00 30-day note, balance 20 days.			
Office Salaries	43	90 00	
Freight Expense	46	44 32	
Cash	2		134 32
Paid salaries and freight bills.			
16.			
Cash	2	1,990 67	
Discount on Notes	32	9 33	
Notes Receivable Discounted	26		2,000 00
Discounted note of Wm. Johnson & Bro.			
Hooker & Sons	73	6,750 00	
Cash	2		6,412 50
Discount on Purchases	40		337 50
Paid invoice of the 12th.			
Cash	2	37 38	
Sales	35		37 38
Cash sales for the day.			
18.			
B. Eckert & Sons	61	1,950 00	
Sales	35		1,950 00
Sold goods as per invoice; terms 2/10, n/30.			

JOURNAL

	L. F.	Debit	Credit
Cash	2	$ 600 00	
Foster Bros.	67	953 50	
Sales	35		$ 1,553 50
Goods sold; terms $600 cash, balance 30 days.			
19.			
Merchandise	30	5,730 00	
F. Jacobs & Sons	78		5,730 00
Purchases as per invoice; terms 3/10, n/60.			
Cash	2	315 44	
Sales	35		315 44
Cash sales for the day.			
20.			
Cash	2	3,960 00	
Discount on Notes	32	40 00	
Notes Payable	31		4,000 00
Discounted our 60-day note at 6%.			
F. Jacobs & Sons	78	5,730 00	
Cash	2		5,443 50
Discount on Purchases	40		286 50
Paid bill of the 19th.			
Printing Expense	47	42 60	
Advertising	44	57 00	
General Expense	45	23 70	
Cash	2		123 30
Paid sundry expense items.			
21.			
Cash	2	321 08	
Sales	35		321 08
Cash sales for the day.			
A. Roberts—Drawing Account	1	200 00	
Office Salaries	43	110 00	
General Expense	45	9 64	
Cash	2		319 64
Withdrew cash for personal use; paid office salaries and expenses.			

JOURNAL

	L. F.	Debit	Credit
23.			
Cash	2	$ 1,000 00	
R. Roberts	69	2,400 00	
Sales	35		$ 3,400 00
Sold merchandise; $1,000.00 down and balance in 10 days.			
Commissions	50	170 00	
Cash	2		170 00
Paid commission to A. Simpson on Roberts' sale.			
25.			
James Farcott & Co.	70	3,590 00	
Sales	35		3,590 00
Sold merchandise as per invoice; terms 2/10, n/30.			
Freight Expense	46	37 30	
Cash	2		37 30
Paid freight on Farcott sale.			
26.			
Commissions	50	179 50	
Cash	2		179 50
Paid commission to A. Simpson on sale to Farcott.			
Cash	2	174 30	
Sales	35		174 30
Cash sales for the day.			
General Expense	45	3 30	
Cash	2		3 30
Paid sundry expenses.			
27.			
Merchandise	30	4,520 00	
Cash	2		2,000 00
Notes Payable	31		2,520 00
Invoice of King & Company; terms $2,000.00 cash, 30-day note for balance.			
28.			
Office Salaries	43	120 00	
General Expense	45	5 92	
Cash	2		125 92
Paid salaries and sundry expenses.			

JOURNAL

	L. F.	Debit	Credit
30.			
Cash	2	$ 600 00	
Notes Receivable	25	880 00	
Sales	35		$ 1,480 00
Sale to Brott & Co.; terms $600.00 cash, balance 30-day note interest 6%.			
Cash	2	72 50	
Sales	35		72 50
Cash sales for the day.			
31.			
Cash	2	3,518 20	
Discount on Sales	39	71 80	
James Farcott & Co.	70		3,590 00
Remittance for bill of the 25th.			
F. Peters & Bro.	71	395 00	
Sales	35		395 00
Sold merchandise; terms 2/10, n/30.			
Cash	2	363 80	
Sales	35		363 80
Cash sales for the day.			

quires an account to represent a claim to the use of the building. In this case, a rent account was opened for the debit side of the transaction and the credit, of course, was to the Cash account.

The transaction with King & Company on the 3rd is a direct exchange. Merchandise is received and a debt to King & Company is incurred. There is an increase in an asset, merchandise, and an increase in a liability. A liability account is opened under the title, "King & Company." It would be possible to carry all of the creditors' items in one

account entitled "Accounts Payable," but, if this were done, it would be necessary to keep, in addition, a separate record of amounts owed to the several creditor concerns. In this exercise, we shall assume that a separate account for each creditor is required.

A settlement of the open account indebtedness to King & Company was made on the 4th. The amount of the entire bill, $21,124.79, is debited to King & Company's account, because that form of indebtedness has been canceled. Cash is credited for the amount of the payment and a new liability item, "Notes Payable," is credited with the amount of the promissory note. The business is still in debt for the purchase of the goods to the amount of $17,124.79, but the form of the liability has been altered. King & Company have a written promissory note as evidence of the claim, which can be discounted by them at a bank or otherwise used to obtain funds before the debt comes due. This type of claim is sufficiently different in character to call for a special liability account.

The second transaction on the 4th covers the payment of the insurance premium on the stock and fixtures. The amount is entered, accordingly, as a debit to an expense account entitled, "Insurance." This is the opposite of an income account. It represents the purchase of services necessary to the conduct of the business. The cost of the services does not constitute an increase in an asset but is, rather, an offset to the profits. Since the sales are *credited* to an in-

come account, the expenses should be *debited* to an expense or loss account. Such an account is a subdivision of net worth.

The first entry on the 5th is a direct exchange of cash for certain items of furniture and fixtures. An asset account, "Furniture and Fixtures," is debited, and Cash is credited for the amount of the transaction. The second transaction on the 5th covers the cash sales for the day. The Cash account is debited for the amount of the sales. The credit includes two elements, namely: (a) a decrease in the merchandise at cost price; and (b) a gross increase in net worth for the amount of the profit on the sales. If the exact amount of these two elements were known directly, the credit would be divided between the accounts affected.

In many cases, it is difficult to state the exact cost of items sold at the time of sale. It is also desirable to have a statement of total sales for each accounting period for the purposes of management control. The cost of merchandise sold may be computed at the end of a period by the inventory process, which will be explained later. As a matter of convenience, and for statistical purposes, the total selling price of goods sold is carried to a separate account, where it will be kept until the amount of net profit can be obtained and the elements transferred to their proper accounts. In this case the Sales account is credited. This is called an income account.

The entries for the 6th also cover a sales transac-

tion. In this case, however, the sale was made to a customer for future payment. The debit, therefore, was made to the customer's account (an asset) instead of to cash. The credit is to the Sales account, the same as for the preceding transaction.

The sale to B. Eckert & Sons on the 7th involved a down payment of $400 and the balance on account. There were two debits, therefore, one to the Cash account and one to the customer's account. The payment of the salaries for the week, also made on the 7th, required a new expense account, "Office Salaries."

The purchase of merchandise at auction on the 9th calls for entries debiting Merchandise and crediting Cash, the two accounts affected. The withdrawal of funds by A. Roberts, the proprietor, involves a reduction in the net worth. This could be debited directly to A. Roberts' Net Worth account. It is desirable, however, to keep a separate account of the proprietor's withdrawals, and this is accomplished by opening an account entitled, "A. Roberts—Drawing Account."

The first transaction of the 10th brings up the question of discounts allowed on sales. Girard & Company's account was originally charged with the invoice price of the goods, $341.25. They actually paid only $334.42 in full settlement of this bill. Their account must be credited with the full invoice price and Cash should be debited with the amount actually received. The difference between these two amounts,

obviously, is an offset to income and should be charged against an expense account. A special account, "Discount on Sales," is opened to carry these allowances to customers.

The transactions of the 11th and 12th, and the first two of the 13th are similar to transactions already discussed. The third transaction recorded on the 13th involves two new expense accounts. Payments made for advertising services are offsets to income and, as such, should be debited to an expense account. In order to have a record of this particular type of expense, the debit in this case was made to an advertising account. The payments for petty expenses are small items that cannot be conveniently classified. They are charged to a General Expense account.

On the 16th, one of the notes receivable was discounted at the bank. The bank allowed $1,990.67 in cash for a note that was carried at $2,000 in an asset account. Cash was debited for the proceeds, and an expense account, "Discount on Notes," was charged for the amount of the discount. The discount on the note is, in reality, an interest charge made by the bank for the use of the funds received. The credit normally would be to notes receivable, since that asset had been reduced. It happens, however, that the endorser of a promissory note is contingently liable until the note is paid. In this case, Mr. Roberts would be liable to the bank for the full amount of the note, if Wm. Johnson & Bro. re-

fused to pay when the note became due. It is desirable to show this contingent liability in the accounts, and a liability account, entitled "Notes Receivable Discounted," is credited. The original entry for the note remains on the debit side of the notes receivable account until notice is received that the note has been paid. At that time "Notes Receivable" will be credited and "Notes Receivable Discounted" debited, thus closing the entire transaction.

In paying Hooker & Sons' bill on the 16th, a discount is taken, amounting to $337.50. This is treated as a special type of income and is credited to "Discount on Purchases."

On the 20th, the firm's own note is discounted at the bank. The amount of the discount in this case is chargeable to the account entitled "Discount on Notes," previously mentioned.

The commissions paid to A. Simpson on the 24th are a special form of compensation for services. Instead of receiving a salary, the employee is paid on a percentage basis for the sales made. The amount of the payment is, nevertheless, an expense charge just as if it were a regular salary item. The debit is to "Commissions," an expense account.

All of the transactions that have not been specifically mentioned are similar to others that have been analyzed, and should cause no difficulties.

8. *Posting the entries.*—The transactions have all been classified and recorded in the journal—a book of original entry—and are ready now to be *posted*

to the appropriate accounts. Posting consists of the routine process of transferring entries that are indicated for each transaction to the account titles, as shown in the journal entries. The book in which the accounts are kept is called the "ledger." A separate account must be opened for every account title in the journal entries.

In actual practice, it is customary to post the journal entries daily, in order to avoid the congestion of work that would result if it were done less frequently. In this exercise, however, we shall illustrate the process by posting all the January entries at one time.

There are a number of possible short cuts in posting that will be described in a later chapter. We are concerned here only with the posting *function* in the accounting process. We will assume, therefore, that the entries in the journal will be posted in chronological order.

To begin with, the first entry shows a debit to cash and a credit to A. Roberts' net worth account. We open an account in the ledger entitled, "Cash," and, on the debit side, enter the date (January 2), the journal page (J1), and the amount of the transaction ($10,000). In the ledger account, the reference to the page of the book of original entry is preceded by the initial of the book from which the entry is posted. We then place the page number of the ledger account in the ledger folio column of the journal opposite the name of the account. This com-

pletes the posting of the debit side of the entry. Next we repeat the process for the credit account. In this case, we shall open an account headed "A. Roberts—Net Worth," and enter on the credit side the date (January 2), the journal page (J1), and the amount ($10,000).

The same process is followed throughout for all of the journal entries. When this is completed, all of the transactions will have been recorded in the appropriate accounts as indicated in the journal. This is a purely routine operation, but it is important that it be done accurately. An error in posting causes no end of difficulties in later accounting operations.

9. *Ledger accounts.*—In the following pages (82–86), the entries that were made in the journal, covering the January transactions, are shown with all postings properly entered. The numbers in parentheses on the lines with the account titles represent assumed page numbers in the ledger. A sufficient amount of space must be provided to accommodate the number of entries affecting the account. It is customary to arrange the accounts in some systematic grouping, and, in opening a new ledger, it might be well to arrange the accounts in accordance with the probable balance sheet classification of items, such as assets, liabilities, proprietorship accounts, income accounts, expense accounts, customers' accounts, and creditors' accounts. However, as new accounts are added, unless sufficient pages have been reserved for the

A. ROBERTS—NET WORTH (1)

								19—							
								Jan.	2			J1	$10,000	00	

A. ROBERTS—DRAWING ACCOUNT (1)

19—															
Jan.	9				J2	$100	00								
	21				J5	200	00								

CASH (2)

19—								19—							
Jan.	2				J1	$10,000	00	Jan.	2			J1	$ 300	00	
	5				J2	118	12		4			J1	4,000	00	
	7				J2	400	00		4			J2	159	38	
	7				J2	91	18		5			J2	500	00	
	10				J3	334	42		7			J2	90	00	
	10				J3	1,188	00		9			J2	1,080	00	
	11				J3	283	84		9			J2	100	00	
	13				J3	648	25		13			J3	83	78	
	13				J3	117	76		14			J4	134	32	
	14				J3	1,000	00		16			J4	6,412	50	
	16				J4	1,990	67		20			J5	5,443	50	
	16				J4	37	38		20			J5	123	30	
	18				J4	600	00		21			J5	319	64	
	19				J4	315	44		23			J5	170	00	
	20				J4	3,960	00		25			J5	37	30	
	21				J5	321	08		26			J6	179	50	
	23				J5	1,000	00		26			J6	3	30	
	26				J6	174	30		27			J6	2,000	00	
	30				J6	600	00		28			J6	125	92	
	30				J6	72	50								
	31				J7	3,518	20								
	31				J7	363	80								

FURNITURE & FIXTURES (5)

19—															
Jan.	5				J2	$500	00								

NOTES RECEIVABLE (25)

19—															
Jan.	14				J3	$2,000	00								
	30				J6	880	00								

NOTES RECEIVABLE DISCOUNTED (26)

								19—						
								Jan.	16			J4	$2,000	00

MERCHANDISE (30)

19—														
Jan.	3			J1	$21,124	79								
	9			J2	1,080	00								
	12			J3	6,750	00								
	19			J4	5,730	00								
	27			J6	4,520	00								

NOTES PAYABLE (31)

								19—						
								Jan.	4			J1	$17,124	79
									20			J4	4,000	00
									27			J6	2,520	00

DISCOUNT ON NOTES (32)

19—														
Jan.	16			J4	$ 9	33								
	20			J4	40	00								

SALES (35)

								19—						
								Jan.	5			J2	$ 118	12
									6			J2	341	25
									7			J2	1,048	25
									7			J2	91	18
									10			J3	1,188	00
									11			J3	283	84
									12			J3	2,902	50
									13			J3	117	76
									14			J3	5,945	00
									16			J4	37	38
									18			J4	1,950	00
									18			J4	1,553	50
									19			J4	315	44
									21			J5	321	08
									23			J5	3,400	00
									25			J5	3,590	00
									26			J6	174	30
									30			J6	1,480	00
									30			J6	72	50
									31			J7	395	00
									31			J7	363	80

DISCOUNT ON SALES (39)

19—																			
Jan.	10			J3	$	6	83												
	31			J7		71	80												

DISCOUNT ON PURCHASES (40)

								19—											
								Jan.	16					J4	$337	50			
									20					J5	286	50			

OFFICE SALARIES (43)

19—																			
Jan.	7			J2	$	90	00												
	14			J4		90	00												
	21			J5		110	00												
	28			J6		120	00												

ADVERTISING (44)

19—																			
Jan.	13			J3		$59	00												
	20			J5		57	00												

GENERAL EXPENSE (45)

19—																			
Jan.	13			J3		$24	78												
	20			J5		23	70												
	21			J5		9	64												
	26			J6		3	30												
	28			J6		5	92												

FREIGHT EXPENSE (46)

19—																			
Jan.	14			J4		$44	32												
	25			J5		37	30												

PRINTING EXPENSE (47)

19—																			
Jan.	20			J5		$42	60												

RENT (48)

19—															
Jan.	2			J1	$300	00									

INSURANCE (49)

19—															
Jan.	4			J2	$159	38									

COMMISSIONS (50)

19—															
Jan.	23			J5	$170	00									
	26			J6	179	50									

GIRARD & CO. (60)

19—							19—							
Jan.	6		J2	$341	25		Jan.	10		J3	$341	25		

B. ECKERT & SONS (61)

19—							19—							
Jan.	7		J2	$ 648	25		Jan.	13		J3	$648	25		
	18		J4	1,950	00									

M. PHILLIPS (65)

19—															
Jan.	12			J3	$2,902	50									

WM. JOHNSON & BRO. (66)

19—															
Jan.	14			J3	$2,945	00									

FOSTER BROTHERS (67)

19—															
Jan.	18			J4	$953	50									

R. ROBERTS (69)

19—															
Jan.	23			J5	$2,400	00									

JAMES FARCOTT & CO. (70)

19—							19—					
Jan.	25		J5	$3,590	00		Jan.	31		J7	$3,590	00

F. PETERS & BRO. (71)

19—												
Jan.	31		J7	$395	00							

KING & COMPANY (72)

19—							19—					
Jan.	4		J1	$21,124	79		Jan.	3		J1	$21,124	79

HOOKER & SONS (73)

19—							19—					
Jan.	16		J4	$6,750	00		Jan.	12		J3	$6,750	00

F. JACOBS & SONS (78)

19—							19—					
Jan.	20		J5	$5,730	00		Jan.	19		J4	$5,730	00

various classes of accounts, the ideal arrangement soon becomes disturbed.

10. *Testing the accuracy of the posting.*—After all of the entries have been posted to the ledger, it is desirable to test the work for accuracy. This is accomplished by preparing a list of all the accounts in the ledger, together with their balances. If all of the work is correct, the total debit balances in the accounts must be equal to the total credit balances. It is obvious that this equality must prevail, since for every transaction the debit items are equal to the credit entries.

It is necessary to go through the ledger and total

the entries in each account. We may then list the excess of debits over credits, or vice versa, for each account. Finally, the debit and credit account balances for all accounts should be obtained in totals. This statement is called a *trial balance.* The following tabulation is a trial balance of the books of A. Roberts, taken after the January entries had been posted:

TRIAL BALANCE OF A. ROBERTS

JANUARY 31, 19—

Accounts	Debit Balances	Credit Balances
A. Roberts—Net Worth		$10,000 00
A. Roberts—Drawing Account	$ 300 00	
Cash	5,872 50	
Furniture & Fixtures	500 00	
Notes Receivable	2,880 00	
Notes Receivable Discounted		2,000 00
Merchandise	39,204 79	
Notes Payable		23,644 79
Discount on Notes	49 33	
Sales		25,688 90
Discount on Sales	78 63	
Discount on Purchases		624 00
Office Salaries	410 00	
Advertising	116 00	
General Expense	67 34	
Freight Expense	81 62	
Printing Expense	42 60	
Rent	300 00	
Insurance	159 38	
Commissions	349 50	
B. Eckert & Sons	1,950 00	
M. Phillips	2,902 50	
Wm. Johnson & Bro.	2,945 00	
Foster Brothers	953 50	
R. Roberts	2,400 00	
F. Peters & Bro.	395 00	
Totals	$61,957 69	$61,957 69

REVIEW

Describe the essential features of a book of original entry.

Explain the process of posting.

Explain why the discounts on purchases were entered on the *credit* side of the Discounts on Purchases account.

State the difference between a Notes Payable account and the account with King & Company, a creditor.

Explain why the totals of the debit and credit balances of all the accounts in the ledger were equal after the transactions were properly posted.

CHAPTER VI

SIMPLE SET OF TRANSACTIONS (*Continued*)

1. *Specialized journals.*—The transactions for the month of February may be journalized and posted to the same accounts as those used for the January entries. In recording the transactions for the second month, two new books of original entry are introduced, namely, a sales book and a cash book. These are merely specialized journals and are used for the same purposes as the journal illustrated in Chapter V.

Each of these books is kept for recording one special type of transaction recurring frequently within an accounting period. A firm sells goods on account a number of times during a month, for example, and there would be considerable saving in maintaining a list of these transactions and posting the total to the Sales account at the end of the month. This is also true of cash transactions. If all of the cash receipts are segregated in one place, and all of the disbursements in another, two postings to the Cash account are all that would be required. It is possible to set up any number of specialized journals, but the two that are used in this exercise are sufficient for illustrative purposes.

2. *List of transactions for February.*—The following transactions occurred in February.

1.—Paid February rent. R. Roberts remits balance due on account. Paid advertising bills, $224.00. Paid for cleaning windows, $4.60. Cash sales today were as follows: 54 yds. Moquette at $3.78 per yd.; 89 yds. Linoleum at $1.22 per yd.; 42 yds. Oilcloth at $.42 per yd.

2.—William Johnson & Bro. remit amount due. Sold F. Peters & Bro., City, the following: 100 yds. Moquette at $3.00 per yd.; 300 yds. Axminster at $1.40 per yd.; 200 yds. Linoleum at $1.10 per yd.; 300 yds. Oilcloth at $.40 per yd.; terms 2/10, n/30. Sold Shaw & Co., Buffalo, N. Y.: 500 yds. Axminster at $1.38 per yd.; 200 yds. Moquette at $3.00 per yd.; 300 yds. Brussels at $2.10 per yd.; 1,000 yds. Oilcloth at $.38¼ per yd.; terms cash, $1,000.00, balance in 10 days.

4.—F. Peters & Bro. remit check in full payment for bill of the 31st ult. Cash sales today are as follows: 153 yds. Axminster at $1.50 per yd.; 50 yds. Wilton at $6.00 per yd. Pay salaries $120.00. Sundry expenses, $17.18, paid in cash.

6.—Foster Bros. have failed and compromised for $.60 on the dollar in cash, balance lost. Prepay by check our note of the 27th ult., less 6% discount for unexpired time. Pay sundry stationery expenses, $12.10. Cash sales today are as follows: 100 yds. Axminster at $1.46 per yd.; 50 yds. Wilton at $5.80 per yd.; 97 yds. Oilcloth at $.40 per yd.; 88 yds. Linoleum at $1.14 per yd.

7.—Bought of Price & Co., City, the following: 1,000 yds. Wilton at $5.36 per yd.; gave in payment 30-day note, with interest at 5%.

9.—Sold to Wm. Johnson & Bro., Troy, N. Y.: 1,000 yds. Oilcloth at $.38½ per yd.; 300 yds. Wilton at $5.76 per yd.; 400 yds. Axminster at $1.32 per yd.; 400 yds. Linoleum at $1.08 per yd.; terms 2/10, n/30. Pay Smithson commission on above sale, 5%, in cash.

11.—Cash sales today were as follows: 100 yds. Linoleum

at $1.20 per yd.; 100 yds. Axminster at $1.40 per yd. Paid in cash, salaries of $130.00; for freight on goods sold, $59.70. Mr. Roberts withdrew for private use, $200.00.

13.—Sold to Maxwell & Co., Albany, N. Y., the following: 1,000 yds. Axminster at $1.32 per yd.; 300 yds. Moquette at $3.00 per yd.; 300 yds. Brussels at $2.10 per yd.; 500 yds. Linoleum at $1.10 per yd.; 500 yds. Oilcloth at $.38½ per yd. Received in payment for this sale, a check for $1,000; a note dated January 14, given to Maxwell & Co. by B. Roberts, of Albany, amounting to $1,400, with 5% interest for 60 days, less 6% discount for unexpired time; balance due in 10 days.

15.—The bank notifies us that Johnson & Bro. have honored their note. Have drawn on Shaw & Co. for amount due me and deposited the draft with the bank for collection. Johnson & Bro. remit balance due on sale of the 9th inst. Pay by check freight on goods sold, $5.12.

17.—Sold King & Company, City, 500 yds. Wilton at $5.00 per yd.; terms 2/10, n/30. Paid in cash, advertising bills, $43.70; sundry expenses, $17.92.

18.—Paid salaries, $130.00. Maxwell & Co. remit for balance due on invoice of February 13.

20.—Cash sales today were as follows: 100 yds. Oilcloth at $.42 per yd.; 43 yds. Brussels at $2.40 per yd.

21.—Sold Brown & Co., Buffalo, N. Y., the following: 1,000 yds. Axminster at $1.36 per yd.; 500 yds. Wilton at $5.60 per yd.; 200 yds. Moquette at $3.00 per yd.; terms 2/10, n/30.

24. King & Company remit for invoice of the 17th inst. Paid Smithson 5% commission, in cash, on Brown & Co.'s sale of the 21st.

25.—Pay salaries in cash, $130.00.

27.—Brown & Co. remit for bill of the 21st inst. The bank notifies us that Shaw & Co. have honored our draft of the 15th inst.

28.—Have made a special agreement with King & Company whereby I prepay my note of the 4th ult. as follows: I

pay them in cash $10,000, and issue to them a 30-day note for the balance; they are waiving their right to interest. Sold Peabody & Langman, Albany, N. Y., the following: 200 yds. Brussels at $2.10 per yd.; 400 yds. Oilcloth at $.42 per yd.; 400 yds. Linoleum at $1.20 per yd.; received cash $600.00; balance due in 10 days. Cash sales today were as follows: 38 yds. Moquette at $3.40 per yd. Have withdrawn for personal use, $400.00, in cash.

3. *February transactions journalized.*—The transactions, as listed above, may now be journalized in accordance with the rules for debiting and crediting accounts. It must be remembered that there are three journals in which to place the original entries, instead of one. All sales transactions must be recorded in the sales book and all cash transactions in the cash book. All other transactions are entered in the journal, as before.

4. *February transactions analyzed.*—The first item, under date of February 1, is recorded in the cash book on the cash disbursement side. The name of the account to be debited, Rent, is entered in the column headed "Cash Cr." This column will be posted to the credit of the Cash account in total. The amount is also placed in the column headed "Sundry Accounts Dr." The second transaction is entered on the receipts side of the cash book. In this case, the name of the account to be *credited* is entered in the column having the appropriate heading. The amount received is entered in the column headed "Cash Dr." The amount of the credit to R. Roberts' account is entered in the "Sundry Accounts Cr." column. The

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	L.F.	Debit	Credit
February, 19—.			
6.			
Loss on Uncollectible Accounts	52	$ 381 40	
Foster Brothers	67		$ 381 40
Compromised account for 60% of amount due, $953.50, because of failure.			
7.			
Merchandise	30	5,360 00	
Notes Payable	31		5,360 00
Purchased from Price & Co.; gave our 30-day note with interest at 5%.			
13.			
Notes Receivable	25	1,400 00	
Interest	51	11 66	
Discount on Notes	32		7 06
Maxwell & Co.	74		1,404 60
For a 60-day note given by Maxwell & Co., dated January 14, and signed by B. Roberts, in amount $1,400.00, with 5% interest for 60 days, less 6% discount for the unexpired time.			
15.			
Notes Receivable Discounted	26	2,000 00	
Notes Receivable	25		2,000 00
The bank notified us that Johnson & Bro. have honored their note of the 14th ult.			

third and fourth transactions on the 1st are recorded in the same manner as the rent item, except that the accounts to be debited are "Advertising" and "General Expense," respectively.

The cash sales transactions are recorded in both the sales book and the cash book. In the sales book, the total amount is entered in the money column,

CASH RECEIPTS

Date	L. F.	Name of Account to be Credited	Explanation	Cash Dr.	Discount Dr.	Sundry A/c's Cr.
19—						
Feb.						
1	69	R. Roberts	Balance due.	$ 2,400 00		$ 2,400 00
	√	Cash sales		330 34		330 34
2	66	Wm. Johnson & Bro.	Balance due.	2,945 00		2,945 00
	75	Shaw & Co.	On account.	1,000 00		1,000 00
4	71	F. Peters & Bro.	For bill of 1/31.	387 10	$ 7 90	395 00
	√	Cash sales		529 50		529 50
6	67	Foster Brothers	60% compromise on account.	572 10		572 10
	√	Cash sales		575 12		575 12
11	√	Cash sales		260 00		260 00
13	74	Maxwell & Co.	On account.	1,000 00		1,000 00
15	66	Wm. Johnson & Bro.	For bill of 2/9.	3,011 54	61 46	3,073 00
18	74	Maxwell & Co.	Balance due.	1,187 90		1,187 90
20	√	Cash sales		145 20		145 20
24	72	King & Company	Amount due.	2,450 00	50 00	2,500 00
27	76	Brown & Co.	For bill of 2/21.	4,664 80	95 20	4,760 00
	75	Shaw & Co.	For draft drawn.	1,302 50		1,302 50
28	77	Peabody & Longman	On account.	600 00		600 00
	√	Cash sales		129 20		129 20
	2	Total debit to Cash account.		$23,490 30		
	39	Total debit to Discount on Sales.			$214 56	
	√	Total already posted to credit	of sundry accounts.			$23,704 86

CASH DISBURSEMENTS

Date	L. F.	Name of Account to be Debited	Explanation	Cash Cr.	Discount Cr.	Sundry A/c's Dr.
19—						
Feb.						
1	48	Rent	For February.	$ 300 00		$ 300 00
	44	Advertising	Sundries.	224 00		224 00
	45	General Expense	Cleaning windows.	4 60		4 60
4	43	Office Salaries	For week ending today.	120 00		120 00
	45	General Expense	Sundries.	17 18		17 18
6	41	Notes Payable	Prepayment of note of 1/27.	2,511 60	$8 40	2,520 00
	45	General Expense	Stationery.	12 10		12 10
9	50	Commissions	5% to Smithson on Johnson sale today.	153 65		153 65
11	43	Office Salaries	For week ending today.	130 00		130 00
	46	Freight Expense	On goods sold.	59 70		59 70
	1	A. Roberts—Drawing Account	For personal use.	200 00		200 00
15	46	Freight Expense	On goods sold.	5 12		5 12
17	44	Advertising	Sundries.	43 70		43 70
	45	General Expense	Sundries.	17 92		17 92
18	43	Office Salaries	For week ending today.	130 00		130 00
24	50	Commissions	5% to Smithson on Brown & Co. sale of 2/21.	238 00		238 00
25	43	Office Salaries	For week ending today.	130 00		130 00
28	31	Notes Payable	Paid on King & Company note by special agreement.	10,000 00		10,000 00
	1	A. Roberts—Drawing Account	For personal use.	400 00		400 00
	2	Total credit to Cash account.		$14,697 57		
	32	Total credit to Discount on Notes Payable.			$8 40	
	√	Total already posted to debit of sundry accounts.				$14,705 97

SALES BOOK

Date	L. F.	Name of Account to be Debited	Explanation and Terms	Amount
19—				
Feb.				
1	√	Cash sales	For the day.	$ 330 34
2	71	F. Peters & Bro.	Invoice 2/10, n/30.	1,060 00
2	75	Shaw & Co.	Invoice $1,000 cash, balance 10 days.	2,302 50
4	√	Cash sales	For the day.	529 50
6	√	Cash sales	For the day.	575 12
9	66	Wm. Johnson & Bro.	Invoice 2/10, n/30.	3,073 00
11	√	Cash sales	For the day.	260 00
13	74	Maxwell & Co.	Invoice $1,000 cash, note for $1,400, balance due in 10 days.	3,592 50
17	72	King & Company	Invoice 2/10, n/30.	2,500 00
20	√	Cash sales	For the day.	145 20
21	76	Brown & Co.	Invoice 2/10, n/30.	4,760 00
28	77	Peabody & Longman	Invoice $600 cash, balance 10 days.	1,068 00
28	√	Cash sales	For the day.	129 20
	35	Total credit to Sales	account.	$20,325 36

and the words "Cash sales" are placed in the column headed, "Name of Account to be Debited." The same form of entry is made in the cash book receipts side, with the words "Cash sales" entered under the heading, "Name of Account to be Credited." A check mark (√) is placed in the ledger folio column of each book to show that no detailed posting is required. The reason for this is that the debit to cash is included in the column total of the cash book and the credit to sales is made in the column total of the sales book.

On February 2, the sale to Shaw & Co. involved a part payment in cash. This is recorded just as

A. ROBERTS—NET WORTH (1)

								19—							
								Jan.	2			J1	$10,000	00	

A. ROBERTS—DRAWING ACCOUNT (1)

19—															
Jan.	31	Total Jan.		√	$300	00									
Feb.	11			D21	200	00									
	28			D21	400	00									
					900	*00*									

CASH (2)

19—								19—							
Jan.	31	Total Jan.		√	$27,134	94		Jan.	31	Total Jan.		√	$21,262	44	
Feb.	28			R20	23,490	30		Feb.	28			D21	14,697	57	
					50,625	*24*							*35,960*	*01*	

FURNITURE & FIXTURES (5)

19—															
Jan.	5			J2	$500	00									

NOTES RECEIVABLE (25)

19—								19—							
Jan.	31	Total Jan.		√	$2,880	00		Feb.	15			J8	$2,000	00	
Feb.	13			J8	1,400	00									
					4,280	*00*									

NOTES RECEIVABLE DISCOUNTED (26)

19—								19—							
Feb.	15			J8	$2,000	00		Jan.	16			J4	$2,000	00	

MERCHANDISE (30)

19—															
Jan.	31	Total Jan.		√	$39,204	79									
Feb.	7			J8	5,360	00									
					44,564	*79*									

NOTES PAYABLE (31)

19—								19—							
Feb.	6			D21	$ 2,520	00		Jan.	31	Total Jan.		√	$23,644	79	
	28			D21	10,000	00		Feb.	7			J8	5,360	00	
					12,520	*00*							*29,004*	*79*	

DISCOUNT ON NOTES PAYABLE (32)

19—							19—					
Jan.	31	Total Jan.	✓	$49	33		Feb.	13		J8	$ 7	06
								28		D21	8	40
											15	*46*

SALES (35)

							19—					
							Jan.	31	Total Jan.	✓	$25,688	90
							Feb.	28		S15	20,325	36
											46,014	*26*

DISCOUNT ON SALES (39)

19—												
Jan.	31	Total Jan.	✓	$78	63							
Feb.	28		R20	214	56							
				293	*19*							

DISCOUNT ON PURCHASES (40)

						19—					
						Jan.	31	Total Jan.	✓	$624	00

OFFICE SALARIES (43)

19—												
Jan.	31	Total Jan.	✓	$410	00							
Feb.	4		D21	120	00							
	11		D21	130	00							
	18		D21	130	00							
	25		D21	130	00							
				920	*00*							

ADVERTISING (44)

19—												
Jan.	31	Total Jan.	✓	$116	00							
Feb.	1		D21	224	00							
	17		D21	43	70							
				383	*70*							

GENERAL EXPENSE (45)

19—																	
Jan.	31	Total Jan.	✓	$	67	34											
Feb.	1		D21		4	60											
	4		D21		17	18											
	6		D21		12	10											
	17		D21		17	92											
					119	*14*											

FREIGHT EXPENSE (46)

19—																	
Jan.	31	Total Jan.	✓	$	81	62											
Feb.	11		D21		59	70											
	15		D21		5	12											
					146	*44*											

PRINTING (47)

19—																	
Jan.	20		J5		$42	60											

RENT (48)

19—																	
Jan.	2		J1		$300	00											
Feb.	1		D21		300	00											
					600	*00*											

INSURANCE (49)

19—																	
Jan.	4		J2		$159	38											

COMMISSIONS (50)

19—																	
Jan.	31	Total Jan.	✓	$	349	50											
Feb.	9		D21		153	65											
	24		D21		238	00											
					741	*15*											

INTEREST (51)

19—																	
Feb.	13		J8		$11	66											

LOSS ON UNCOLLECTIBLE ACCOUNTS (52)

19—													
Feb.	6			J8	$381	40							

B. ECKERT & SONS (61)

19—							19—					
Jan.	31	Total Jan.	✓	$2,598	25		Jan.	31	Total Jan.	✓	$648	25

M. PHILLIPS (65)

19—													
Jan.	12			J3	$2,902	50							

WM. JOHNSON & BRO. (66)

19—							19—					
Jan.	14			J3	$2,945	00	Feb.	2		R20	$2,945	00
Feb.	9			S15	3,073	00	Feb.	15		R20	3,073	00
					6,018	*00*					*6,018*	*00*

FOSTER BROTHERS (67)

19—							19—					
Jan.	18			J4	$953	50	Feb.	6		R20	$572	10
							Feb.	6		J8	381	40

R. ROBERTS (69)

19—							19—					
Jan.	23			J5	$2,400	00	Feb.	1		R20	$2,400	00

F. PETERS & BRO. (71)

19—							19—					
Jan.	31			J7	$ 395	00	Feb.	4		R20	$395	00
Feb.	2			S15	1,060	00						
					1,455	*00*						

KING & COMPANY (72)

19—							19—					
Feb.	17			S15	$2,500	00	Feb.	24		R20	$2,500	00

MAXWELL & CO. (74)

19—							19—					
Feb.	13		S15	$3,592	50		Feb.	13		R20	$1,000	00
								13		J8	1,404	60
								18		R20	1,187	90
								18			*3,592*	*50*

SHAW & CO. (75)

19—							19—					
Feb.	2		S15	$2,302	50		Feb.	2		R20	$1,000	00
								27		R20	1,302	50
											2,302	*50*

BROWN & CO. (76)

19—							19—					
Feb.	21		S15	$4,760	00		Feb.	27		R20	$4,760	00

PEABODY & LONGMAN (77)

19—							19—					
Feb.	28		S15	$1,068	00		Feb.	28		R20	$600	00

though two transactions had occurred. The full amount of the sale is entered in the sales book and debited to Shaw & Co. A second entry is immediately made in the cash book on the receipt side and a credit of $1,000 is entered to Shaw & Co.'s account. The net effect of the two entries is to leave the proper amount charged against their account.

On the 4th, F. Peters & Bro. remit for their bill of January 31. According to the terms of the bill, they were allowed a discount of $7.90. The amount of cash received is entered in the cash column on the receipts side of the cash book and the discount is entered in the "Discount Dr." column. The full amount of the bill is placed in the third money

column. This illustrates the use of a discount column in the cash book.

A new account, entitled "Loss on Uncollectible Accounts," was opened by journal entry to cover the loss on Foster Bros. account under the date of February 6. The amount of the cash received on this delinquent account is entered in the cash book in the usual way.

The prepayment of the note on the 6th illustrates the use of the discount column on the disbursements side of the cash book. The Notes Payable account should be debited for the face of the note, $2,520, and Cash credited for only $2,511.60. The difference between these amounts will be credited to Discount on Notes by placing the amount, $8.40, in the column headed "Discount Cr."

On the 13th a sale was made to Maxwell & Co., amounting to $3,592.50. This is entered in the sales book in the usual way. The method of payment was somewhat involved. They remitted by check $1,000 and this amount is entered to the credit of their account by a cash book entry. In addition, they turned over a 60-day note, dated January 14, from B. Roberts in part settlement. The note amounted to $1,400 and bears interest at the rate of 5 per cent. They allowed 6 per cent discount on the unexpired time of the note. The balance of the invoice is due in ten days. A journal entry is required to record the receipt of the note, and the interest adjustments. The entry is as follows: debit "Notes Receivable"

for the face of the note, $1,400; debit "Interest" for the 5 per cent interest for sixty days, $11.66; credit "Discount on Notes" for the 6 per cent discount allowed on the unexpired time of thirty days, $7.06, which is computed on the amount of the note plus the interest which Roberts will be called upon to pay; credit "Maxwell & Co." for the difference of $1,404.60.

The bank sent a notice on the 15th that Wm. Johnson & Bro. have honored their note. This is the note that had been discounted at the bank on January 14. At that time, the account "Notes Receivable Discounted" was credited, as was explained in the analysis of transactions in Chapter V. In view of the fact that the note has now been paid, the contingent liability is eliminated. This fact is recorded by the following journal entry: debit "Notes Receivable Discounted," to show that the contingent liability is wiped out, and credit "Notes Receivable," as there is no longer a claim against Wm. Johnson & Bro. on the note.

No book entry is needed to record the drawing of the draft on Shaw & Co. on the 15th. Later, on the 27th, when the bank sends a notice that the draft has been honored, an entry is made in the cash book crediting Shaw & Co.'s account.

The history of the transaction with King & Company for the 28th is as follows: On January 4, a note was made out to King & Company for $17,124.79, bearing 6% interest, payable in 90 days. By spe-

cial arrangement, they agree to waive interest to date, in consideration of a cash payment of $10,000 and a new note for the balance. In effect, this means that the notes payable have been reduced by $10,000 and we are still indebted on the new note to the extent of $7,124.79. A cash book entry on the disbursement side with a debit to "Notes Payable" for $10,000 is sufficient to record the transaction.

All of the transactions that have not been mentioned in this analysis are similar to others that have been discussed. The reader is advised to go through all of the transactions in the list and locate the appropriate entries in the books of original entry. This will aid materially in clearing up any questions that might arise in the use of specialized journals.

5. *Posting the entries for February.*—The February transactions are posted to the same set of accounts as those for January. All of the accounts that were opened are repeated in the preceding pages, showing the debits and credits as they appeared on January 31. In accounts that showed more than one debit or credit entry, the totals were carried over, to simplify the illustration. The details of the January entries may be found by reference to the ledger accounts shown in Chapter V.

The journal entries are posted in exactly the same manner as those in the exercise for January. It is unnecessary to explain that process again in this chapter.

The sales book is posted as follows: First, total

the money column. This amount should be posted to the credit of the sales account in the ledger. Place the page number of the sales book in the folio column of the account with the letter "S" to indicate that it was posted from the sales book. Place the ledger page in the folio column of the sales book on the same line with the total. This completes the posting of the credit element for all of the sales. Next, post the debit items, as indicated, in the column headed, "Name of Account to be Debited." As mentioned previously, cash sales items are not posted because they are entered in the cash book and the cash account is debited when this book is posted. Under date of February 2, there is a debit to F. Peters & Bro. for $1,060.00. Enter this amount in their account on the debit side and place the sales book page number in the journal folio column with the letter "S." Enter the ledger page number of F. Peters & Bro.' account in the ledger folio column of the sales book. When all of the debit items have been treated in this manner, the sales book will have been posted.

The cash receipts side of the cash book is posted in much the same way. First, total all three money columns. Post the total of the "Cash Dr." column to the debit side of the cash account. Also post the total of the "Discount Dr." column to the debit of the discount on sales account. Then post each of the items in the third column to the credit side of the accounts indicated in the column headed "Name of

the Account to be Credited." Cash sales transactions are not posted because they already have been taken care of in posting the credit to Sales from the sales book.

The cash disbursements side of the cash book is posted in the same way. In this case, however, the total of the cash column is posted to the *credit* side of the Cash account and the total of the discount column to the *credit* of the Discount on Notes Payable account. The individual items which appear in the third column are posted to the *debit* side of the account title indicated.

6. *Adaptation of the specialized journals.*—It is clear that the posting process was simplified by the use of the specialized journals illustrated in this exercise. The possibilities, in actual practice, for expanding these devices are unlimited. Specialized journals might be constructed for purchases or any other type of transaction which recurs frequently in the same form. Not only is the posting of books simplified by the process, but it makes possible the subdivision of the bookkeeping tasks in an office where a number of bookkeepers are required to handle a large volume of work.

Each of the books of original entry can be made still more effective by the use of special columns. In the sales book, for example, it would be possible to have several columns in which to classify the sales. Instead of having just one column for money amounts and crediting one Sales account for the total,

TRIAL BALANCE OF A. ROBERTS
FEBRUARY 28, 19—

Accounts	Debit Balances	Credit Balances
A. Roberts—Net Worth		$10,000 00
A. Roberts—Drawing Account	$ 900 00	
Cash	14,665 23	
Furniture & Fixtures	500 00	
Notes Receivable	2,280 00	
Merchandise	44,564 79	
Notes Payable		16,484 79
Discount on Notes	33 87	
Sales		46,014 26
Discount on Sales	293 19	
Discount on Purchases		624 00
Office Salaries	920 00	
Advertising	383 70	
General Expense	119 14	
Freight Expense	146 44	
Printing Expense	42 60	
Rent	600 00	
Insurance	159 38	
Commissions	741 15	
Interest	11 66	
Loss on Uncollectible Accounts	381 40	
B. Eckert & Sons	1,950 00	
M. Phillips	2,902 50	
F. Peters & Bro.	1,060 00	
Peabody & Longman	468 00	
Totals	$73,123 05	$73,123 05

separate columns might be provided in which to record the sales of Axminster, Moquette, Brussels, Wilton, Linoleum, and Oilcloth. This would enable the manager to see at a glance which type of merchandise was yielding the most sales.

The possibilities for simplifying the bookkeeping process still further by these and other devices will be explained somewhat more fully in Chapter XVIII.

7. *Trial balance for February.*—The accuracy of the posting operations covering the February transactions can be tested by taking another trial balance of the ledger accounts. The ledger was in balance on the first of the month, as shown in the trial balance for January 31. If all of the entries for February were correctly made and posted, a tabulation of account balances should show the totals of debits and credits still equal. This is shown in the trial balance on page 107.

REVIEW

Explain how specialized journals aid in simplifying the bookkeeping work.

Show why the cash sales transactions are entered in both the sales book and the cash book. Does this result in a duplication of entries in the ledger accounts?

Name any additional books of original entry that might be used in a business similar to the one in the illustration.

Define a "contingent liability." Give an illustration.

CHAPTER VII

THE TRIAL BALANCE

1. *Accounting technique a series of processes.*— In Chapters V and VI, some of the commonly employed methods of entry were discussed and illustrated. There is a certain amount of routine involved in any system. The setting up of accounts, determining debit and credit entries for each transaction, and posting to the ledger accounts are essential steps in every bookkeeping system. The ultimate goal of these processes is the preparation of a balance sheet statement that will accurately portray the financial condition of an enterprise. Emphasis was placed upon the functions of a system from this standpoint rather than upon the technique involved. Accuracy in the mechanical bookkeeping operations, however, is essential.

The double entry system affords opportunities at various stages for checks upon the accuracy of the work of the bookkeeper. After each step, it is possible to prove by arithmetical tests whether or not the work up to that point is correct. Each one of the books of original entry may be tested by proving that the totals of debit and credit entries are equal. After the posting operations have been completed, a

trial balance of the accounts will show whether the books are still "in balance." The final stage in bookkeeping consists in closing the accounts and preparing the balance sheet.

2. *Importance of accuracy.*—If accounting records afforded no means of proving the accuracy of results, they would hardly play their present important part in the conduct of business. Mere memorandum records are always looked upon with suspicion and are valued chiefly as supplementary data to the formal accounting statements.

The proof derived from the equality of debits and credits is not the only index of reliability that bookkeeping possesses. The very rigidity of its procedure helps to make the results, when expressed, more accurate and to clothe them with an air of reliability. Furthermore, through the standardized procedure that he follows and the means of proof afforded through posting references and other checking methods, the accountant is continuously testing his figures and taking every possible step to insure their accuracy.

3. *Proof of accuracy by account totals.*—The posting process is most susceptible to clerical error, hence a proof of accuracy at that point is important. If the books of original entry have been properly posted, the total of the debit and credit entries in all of the ledger accounts will be equal. A list of the accounts, showing the debits and credits to date, will serve as a test. The bookkeeper adds the items in

each account, placing small pencil footings just below the last entry on each side, as shown in the ledger accounts in Chapter VI. He may then prepare his proof by listing the debit and credit totals in each account. If the total of all debits equals the total of all credits, there is reasonable proof that the amounts in the various journals have been transferred correctly and the entries in each account accurately added.

4. *Proof by balances of accounts.*—The accountant is not particularly interested in the total debits and credits in any account. His interest lies chiefly in the balances of the accounts. Consequently, what is wanted, after the posting has been completed, is a statement of account balances rather than a statement of debits and credits in each account. This may be obtained simply by subtracting the debits from the credits in each account, or vice versa, and then listing the balances. This method was used in preparing the trial balances at the end of Chapters V and VI.

This listing of net open balances does not disturb the equilibrium of debits and credits, since the same amount is deducted from both sides of each account. It is, therefore, an effective test upon the accuracy of the ledger. In addition to this, the trial balance forms the basis for further accounting processes in the preparation of the financial statements.

5. *Tracing errors.*—If the trial balance does not balance, that is, if the total of the debit balances does

not equal the total of the credit balances, the bookkeeper must trace down his errors and make the necessary corrections. This may be a very simple process, involving merely the locating of some one item that had been omitted or posted incorrectly, or it may be a very difficult matter to find the error. In some cases, it becomes necessary to spend several days in detailed checking to find an error of only a few cents in the trial balance. A small error is just as serious as a large one, because it is always possible that it is caused by several mistakes that tend to offset one another.

The books of original entry usually are in such form that separate totals of debits and credits can be drawn off, making it possible to allocate the error as between the journalizing and posting operations. If there has been no error in the individual entries, there must have been one or more errors in transferring items to the ledger accounts. All entries in the ledger may then be traced by means of the folio numbers shown in the reference columns, both in the ledger and in the books of original entry. It is necessary to keep checking until the exact amount of the error in the trial balance has been located.

A number of short cuts has been devised by bookkeepers to save time in locating errors. If the amount of the error is a sizable figure, the bookkeeper may run his eye rapidly over the journals in search of an entry of that amount with the thought that he might have neglected to post one side of the

transaction. If the error is divisible by two, he might look for a figure of half the amount, to see if he had posted such an item to the wrong side of an account. Again, if the error is divisible by nine, he would suspect a transposition of numbers. In transferring the figure 83 to the ledger, he might inadvertently write 38. The error in this case is 45. Similarly, every transposition of numerals would be divisible by nine. These are merely aids in locating common clerical errors and, if they fail to produce the desired results, there is nothing to do but go through the long tedious process of checking ledger entries against the journal entries.

6. *Limitations of the trial balance.*—A trial balance is generally considered a proof of the accuracy of accounting records and, if the trial balance "balances," the bookkeeper feels that he has no further worries with regard to errors in the work. As a matter of fact, however, there are a number of errors that a trial balance proof will not disclose, and that only a thorough system of internal checking will uncover. These errors are the following:

(a) The omission of a debit and credit of equal amount may be made when posting from the journal to the ledger. A complete entry may be omitted from the posting and the trial balance will still balance. If the bookkeeper glances over each journal page after the posting is completed, however, he will perceive any omission, since there will be no page reference opposite that item in the posting folio column.

(b) Two or more errors in posting may be made, the total debits and credits of which exactly offset each other. Thus, cash receipts may be overstated by $100 and the merchandise sales overstated by a like amount. The equality of the two errors leaves the equilibrium of the trial balance undisturbed.

(c) An item may be posted to the wrong account. A debit to one account may be incorrectly posted as a debit to another account or a credit to one account may be incorrectly posted as a credit to another account. If the amount has been transferred correctly and the correct position maintained, as regards debit and credit, the transfer to the wrong account will not be disclosed by the trial balance.

(d) There may be an omission or an incorrect statement of a transaction in the books of original entry. Since such errors affect both sides equally, the books will still balance.

Unfortunately, there are no positive methods of avoiding errors. However, a comprehensive system of internal checks will do much toward eliminating them and the employment of capable bookkeepers will make negligible the danger of errors of this nature. Furthermore, as one learns accounting and becomes familiar with the proper relationships between accounts, errors of large amounts will be apparent through the distorted relations which they introduce into the accounts.

7. *Reconciling the cash account with the bank balance.*—Periodically, usually at the end of each month, the cash balance as shown by the books

should be reconciled with the bank statement. It is customary in business practice to deposit in a bank all money received and to draw checks for all payments. If some money is needed for making change or for small expense items, a separate account is kept for that purpose, called "Petty Cash," so that the regular cash account constitutes a record of transactions with the bank.

Proceeding, then, on the assumption that all receipts are deposited, the steps involved in reconciling the balance of cash on hand, as shown by the books, with the balance as shown by the bank statement are as follows:

(a) The check book must agree with the cash account. This should be no hard task, since all the information in the cash account is obtained from the check book, and the two should always be in agreement.

(b) The check book must be reconciled with the bank statement. This step is not so simple, though even here the procedure is not difficult, once the principle underlying it has been mastered. Outside of mathematical errors, which are easily caught, differences between the balance of cash, as shown by the bank statement, and the balance, as shown by the check book, must result from one of the following causes:

(1) A deposit may have been made after the close of banking hours on the last day of the month, which will have been entered as a part of the current month's deposits in the check book, but not credited to the company's account by the bank until the following month.

(2) Checks drawn and dated toward the close of the month and deducted from the balance of cash, as shown in the check book, may not be returned to the bank until sometime in the following month, and hence will not have been deducted by the bank at the time their statement is made up.

(3) Charges to the depositor's account may be made by the bank for checks returned "unpaid" toward the end of the month, and it is possible that notice of these charges may not reach the depositor through the mail in time for his bookkeeper to enter them before he closes his books. In this case, the balance in the check book would be overstated by the amounts involved.

To facilitate proof, running totals in the check book should be kept, which will show separately the total of the balance of cash at the beginning of the month, plus all the deposits made during the month, and the total of the checks drawn during the month, plus whatever checks were outstanding at the beginning of the month. The canceled checks returned by the bank with the bank statement should be checked in detail against the stubs of the checks drawn, and a list made of all outstanding checks that have not yet been presented at the bank. The reconciliation of the bank balance on February 28 with the books of A. Roberts in the illustration of Chapter VI might appear as in the form on page 117, assuming that the last day's cash items had not been entered on the bank books.

Feb. 28, 19—

Bank balance as per bank statement		$24,336.03
Less outstanding checks		
# ———	$10,000.00	
# ———	400.00	10,400.00
		$13,936.03
Add deposit of Feb. 28— not yet entered by bank		729.20
Balance as per check book		$14,665.23

The reader will note from this that the balance as shown by the bank statement is reduced by the amount of checks outstanding that have not yet been presented and is increased by the amount of deposits that legitimately belong to the business of the month of February but have not been so handled by the bank. Having reconciled the bank statement with the check book, in starting off the check book for the next succeeding month, the balance to be brought forward is the balance shown in the check book at the end of the previous month. To this balance will be added current deposits. The disbursement column in the check book will contain only current items.

8. *Other purposes of the trial balance.*—Of an importance almost equal to its functions as a proof of accuracy is the use of the trial balance as a basis for the preparation of the statements. It is a convenient source of information concerning the balances of specific accounts or the total of any particu-

lar group of accounts. The trial balance shown on page 107 in Chapter VI, for example, conveys information with respect to each of the asset items—cash, furniture and fixtures, notes receivable, merchandise, and the group of customers' accounts. It also shows the volume of business done for the period covered by the statement and the amounts of the different types of indebtedness. It is impossible to tell directly from a trial balance just what the net profit has been, but the amounts of the principal expense items are shown in the account balances. The trial balance referred to shows that the following expenses were incurred in the months of January and February: Office salaries, $920.00; advertising, $383.70; general expense, $119.14; freight expense, $146.44; printing expense, $42.60; rent, $600.00; commissions, $741.15; interest, $11.66; and loss from uncollectible accounts, $381.40. These expense items were incurred in connection with the production of gross sales of $46,014.26, as shown by the credit balance in the Sales account. It would be necessary to take an inventory of the merchandise, in order to determine the cost of goods sold, and thereby the amount of the gross profit on sales.

The process of adjusting the accounts and computing the exact amount of profit earned is called "closing the books." There is a certain amount of technical routine involved in this process, just as there is in the preliminary bookkeeping steps. The trial balance furnishes the basic materials for the

closing operations. These will be discussed in later chapters.

9. *Complications in accounting.*—In the discussion of accounting technique thus far, it has been assumed that accounts and transactions may be readily classified. The rules for debiting and crediting accounts were developed upon the fundamental classification of accounts, namely, assets, liabilities, and net worth. This classification is adequate for the purposes of accounting analysis.

It is true, however, that in actual practice there is not always such a clear-cut distinction between the various classes of accounts. Some transactions are so involved that it is impossible immediately to apportion the elements definitely to asset, liability, or net worth accounts. This gives rise to what are termed "mixed accounts." Furthermore, there are some types of transactions that can be measured quantitatively only after a considerable lapse of time. The amount of depreciation on buildings and machinery is an illustration. These complications constitute the most interesting phase of accounting practice.

10. *Summary of accounting fundamentals.*—The purpose of the foregoing discussion has been to develop in a logical manner the basic principles of accounting procedure. These principles are the basis for the operations of the most intricate accounting system in existence today. They should, therefore, be thoroughly understood before proceeding to a

consideration of the more difficult problems of accounting to be discussed in the succeeding chapters of this volume.

There are certain features of the double entry system that have been emphasized throughout all of the preceding discussions. These are the things that distinguish the formal organized system of record keeping from an unorganized or incomplete method of recording financial data. It is true that some of the principles or procedures may be modified or elaborated upon in the application of the double entry system to particular enterprises, but the fundamental considerations are as follows:

(a) A system of rules and procedure that governs all methods and operations
(b) A system of accounts by which business information is collected in momentary terms
(c) Journalizing transactions for recording purposes; or, in other words, assigning debits and credits to the accounts affected
(d) The use of standardized forms and the assignment of definite positions to certain phases of transactions, in order that form and position may take the place of lengthy narrative in journalizing
(e) The transfer or posting of transactions to the proper accounts in the book of final entry—the ledger
(f) Maintenance of the doctrine of equality of debits and credits in all records, whereby a partial proof of the accuracy of the work becomes possible
(g) The summarizing of account data into statement form for executive use

(h) Uniformity of principles throughout all business organizations

(i) Application of these principles to the particular conditions existing in each individual concern, so that the accounting system will reflect the condition of that particular business

Every business has its own peculiarities of procedure. Only in so far as it is designed to bring out the conditions of the individual business, and reflect the development of the executive policies, does the accounting system really serve as a basis for executive control and render the aid that it should in the determination and formulation of executive policies. The selection of accounts, the subject matter of the next chapter, plays an important part in the adaptability of an accounting system to the needs of a particular business.

REVIEW

State concisely what is meant by a trial balance.

Sometimes a trial balance is prepared by listing both the debits and credits for all ledger accounts and sometimes the account *balances* only are listed. Can you see any advantage of one method over the other?

Explain and illustrate some of the methods used to locate errors.

The balance in the cash account is $4,235.22, whereas, the bank statement shows a balance of $4,526.85. How would you proceed to reconcile the two statements?

The trial balance is a division point in the work of the bookkeeper. What is the distinction between the work which precedes and that which follows the preparation of this statement?

Give a list of the steps in the bookkeeping process.

CHAPTER VIII

CLASSIFICATION OF ACCOUNTS

1. *Appropriate account titles are essential.*—The accounts in an accounting system are much like words in a language. There must be a sufficient number properly to portray the information which it is desired to convey to interested parties. Accounting systems are devised for the purpose of constructing an intelligible history of business operations and to preserve a record of various classes of transactions. The titles of accounts should clearly indicate the nature of the data collected under them. Consequently, successful interpretation of the statements requires, as a preliminary, the grouping of transactions into expressive accounts.

Since accounts play such an important part in accounting procedure and interpretation, more than ordinary care and consideration should be given to the selection of titles and to the fundamentals of account classification. In assimilating transactions into the accounting records, their effects are analyzed, combined with similar data, and then presented in a new form under an appropriate heading. Each account, therefore, contains a summary of all transactions which relate to the particular phase or part

of the business indicated by its title. The account sets forth the results of numerous transactions in total. The Cash account, for example, shows in summary form the effect of all cash transactions, for a certain period of time, on the cash resources of the enterprise. Other accounts present, in a similar manner, the effect of transactions on other factors.

2. *Each account is limited to one factor.*—The value of accounts lies chiefly in their aid to executives in the control and development of business. Interpretation of statements involves an examination of the balance in each account and a study of its relation to other accounts. This, in turn, calls for a general familiarity with the conditions of the business, that is, with the causes which have led up to the results shown in the accounts.

A person who is skilled in the interpretation of accounts draws inferences and conclusions that are not explicitly stated in the records. The grouping together of more or less unrelated items under one account title results in confusion and misleading inferences. In establishing a classification of accounts, therefore, it is essential to provide a sufficient number of titles, so that each individual account will reflect the results of only one particular phase or factor that goes to make up the conduct of the business as a whole.

In the illustrative list of accounts in Chapters V and VI, accounts are given for all of the assets owned by the business, and these are so sufficiently differen-

tiated that no two items are grouped under one head, unless they are closely related. The same applies to the liabilities. There is a separate account for every kind of individual debt. Asset and liability accounts are readily classified and do not present particularly difficult problems of classification.

The net worth accounts, however, cannot be dismissed so casually. Changes in net worth are caused by many factors that influence business operations. It is clear that one account for net worth would be entirely inadequate to bring out the facts necessary to accounting control. The classification of net worth accounts, therefore, presents some different questions of analysis.

3. *Need for classified data.*—The executive is interested in learning the amount of profit or loss for a period, i.e., the total increase or decrease in net worth. The mere knowledge of the net change alone, however, will not aid him greatly in planning future operations. The knowledge that his business had not made money in the past would, of course, lead him to make more strenuous efforts in the next period. If he did not have information concerning the causes for the losses, as to what particular expenses were too high or in which department sales were too low, it would be impossible for him to formulate a constructive program to remedy the situation.

Business men are constantly exerting every possible effort to expand their operations and to increase

profits, or to convert ungainful operations into operations which will show a profit to the business. In investigating losses, or in seeking ways and means of increasing profits, the executive asks for a record of expenses in the past, of sources of income, of the relation of various expenses to income, of the lines of product upon which profits have been made, and of those lines upon which losses have been incurred. In addition to this, he asks for comparisons of these elements in one month or year with those of previous periods.

The means of bringing together data of this sort for the use of the executive is the setting up of special accounts in which to record clearly the various sources of income and causes of expense. In other words, all transactions that produce changes in net worth are analyzed and their effects are subdivided into groups of like elements. For example, a manufacturing concern that produces ten different articles will provide a special Sales account for each type of commodity. Furthermore, there will be a classification of expenses, which will provide information concerning not only the costs of operating different departments of the business, but the cost of producing each type of product. These accounts will show the products that are manufactured and sold at the greatest profit.

4. *Purchase and sales accounts.*—Whether a trading concern sells its goods at wholesale or at retail, its gross profits are secured from the excess of the

selling price over the purchase price of the merchandise sold. It is not always possible to determine the margin of profit on each sale as it occurs. In the case of the wholesale carpet dealer whose accounts were illustrated in the preceding chapter, the purchases were made at different prices, and, from the data given, it was impossible to tell from which particular lot of goods the individual sales were made.

This is the typical situation in a merchandising business. Purchases are made from time to time at prices that vary considerably. At any one time, therefore, there are goods in stock that were purchased at different prices. When a bill of goods is sold, it is more than likely that items will be taken from several different lots, so that the salesman cannot identify the purchase prices of the specific items sold.

Under these conditions, it is necessary to maintain two groups of trading accounts, one for purchases and another for sales. A separate Sales account and a special Purchase account will be kept for each class of goods handled. It is then possible to determine the amount of gross profit from trading over a period of time, after the cost of goods sold has been computed.

5. *Inventory adjustment.*—If all of the goods handled by a trading concern were sold during an accounting period, so that there was no inventory at the time of taking the trial balance, the difference between the credit balance in the Sales account and

the debit balance in the Merchandise account would represent the gross profit.

In the trial balance taken from the books of A. Roberts on February 28, as shown on page 107, the Merchandise account shows a debit balance of $44,564.79. This represents the cost of all merchandise purchased during the months of January and February. At the same time, the Sales account shows a credit balance of $46,014.26. If there were no goods in stock at that time, it is clear that the gross profit on the merchandise sold would be the difference between those figures, or $1,449.47. We can be sure, however, that a manager would not allow his stock to become completely depleted, if he expected to remain in business. There were some goods in stock on February 28. The debit balance in the Merchandise account, therefore, does not represent the cost of goods sold. It is necessary to allow for the inventory in computing the amount of gross profit.

We may assume that Mr. Roberts takes an inventory of the merchandise on hand and values it at the cost price. The inventory shows that he still has goods in stock which cost him $5,872.00. This figure, deducted from the total cost of merchandise purchased ($44,564.79), leaves the cost of goods sold at $38,692.79. The total sales ($46,014.26), minus $38,692.79, gives the gross profit, or $7,321.47.

The inventory adjustment in merchandise accounts may be stated in tabular form as follows:

Inventory at beginning of period, represented in the Merchandise account balance	$	
Plus purchases during the period, represented by debits to the Merchandise account	$	
Total cost of merchandise	$	
Minus inventory end of period	$	
Cost of goods sold		$

6. *Income and expense accounts.*—The accounts set up to differentiate the various classes of debits and credits to net worth, resulting from the operation of the business, are generally called income and expense accounts. Other designations are sometimes applied, such as profit and loss accounts, or revenue and expense accounts. The accounting profession has not yet established a terminology for this class of accounts that has secured universal adoption. This fact does not cause confusion in the interpretation of accounts, if a person has a clear understanding of the nature of the items that are entered in the accounts. For the present, we shall use the designation of expense and income accounts; in later chapters, the other titles will be used interchangeably, so that the reader will be able to analyze statements regardless of the particular terminology used.

The income accounts are used to record the various causes of increases in net worth, such as sales, interest earned, and other sources of revenue. The expense accounts, on the other hand, are used to classify the causes for decreases in net worth, or offsets to income. Normally, all income accounts have credit balances, and all expense accounts have debit bal-

ances. The difference between the balances in these two groups of accounts, at the close of any accounting period, is the net profit, or net addition to the net worth of the enterprise. Of course, if the expense account balances are greater in amount than the income account balances, the difference must be deducted from Net Worth, because, in that case, the concern would have operated at a loss.

It would be possible to have one Income account and one Expense account. The difference between the two would show the correct amount for net profit. This arrangement would hardly satisfy an executive who looks to his accounts for information as to causes of change. In one of the illustrations earlier in the chapter, the point was made that several merchandise and sales accounts are desirable to show the trading profit by lines of goods handled. The same thing may be said with respect to the determination of net profit. A manager would not be satisfied with a statement of net profit for the business as a whole. He would want such details of both sales and expenses as would throw light on the particular departments or divisions of the business responsible for the net profit.

Expenses are incurred in producing or handling the specific products or services that the firm offers for sale. Information concerning expenses, therefore, should be grouped, as nearly as possible, in accordance with the classification of the sales accounts. This is not always possible, as there are some ex-

penses incurred in the production of several products that cannot be accurately apportioned among them. These limitations will be discussed in later sections of the Text. The object of the expense and income classification should be kept in mind, however, namely, to arrange both groups of accounts in such a way that as much information as possible may be obtained on the net profits by classes of commodities or services.

7. *Income accounts.*—The sales accounts have already been described as income accounts. These accounts are credited with the sales at selling prices. There are as many different sales accounts as there are classes of goods or departments of a business for which detailed income records are desired. They may be further subdivided to show sales by territorial divisions, or even by individual salesmen.

Another group of accounts represents items of income that are not directly connected with the main operations of the business. The receipt of interest, dividends on stocks owned, and discounts earned are illustrative of this type of income. These classes of income are called "non-operating" income to distinguish them from the operating income from sales. Accounts should be provided for all such types of income so that unlike items will not be grouped together.

Usually there are no specific expenses to assign to these non-operating income items and they are, therefore, treated as net income items. Dividends

received, for example, constitute a form of income for which no costs of production are incurred by the individual or concern that owns the stock. They may be treated as net income at the time the dividend checks are received. This is the chief distinction between incomes of this type and those resulting from the sale of merchandise.

There are always some offsets to sales in the form of expenses. Goods or services cannot be obtained free of charge, and the costs must be determined before the *net* increase in net worth from sales is known. There are times during which the costs or expenses exceed the income from sales. It may seem contrary to the rule that all sales constitute income items to include those made at a loss. Even sales made under such circumstances, however, are in fact income items. They are *gross* incomes, or *gross* additions to net worth. The word *gross* as applied to sales transactions is important.

Any transaction which involves the sale of a commodity or service causes a gross increase in the net worth of the enterprise. The costs of producing the thing sold are offsets or deductions which must be considered in determining *net* income. If the costs are greater than the sales in any one transaction or group of transactions, net income becomes a minus quantity and is deducted from the net worth accounts. We shall make use of the terms gross and net income throughout the text in accordance with these definitions.

8. *Expense accounts.*—Expenses have been described as offsets to income, or as decreases in net worth, or as costs incurred in producing the particular things which are sold. These are convenient ways to express the characteristics of expense items. It is not always a simple matter, however, to determine whether a particular item is an expense. Expenditures are often made for items that might be treated either as assets or expenses, depending upon the way in which the particular transaction is interpreted. A business obviously would not deliberately incur an expense unless it expected ultimately to profit by the transaction.

From this point of view, it may be assumed that every expenditure is in the nature of an investment. The purchase of a building is clearly a transaction involving the acquisition of an asset. A payment made for the services of an employee is also in the nature of an investment, although it does not attach itself to any specific piece of property that can be classified as an asset. Therefore, we call it an expense. The building gradually wears out and the cost is transferred from the asset account, "Buildings," to an expense account, "Depreciation."

Fundamentally, there is very little difference between the investment in a building and one in current services. Both are made for the purpose of adding to the value of the products or services produced by the enterprise. It takes years for the building to disappear as a tangible asset, whereas the services

are consumed in production practically as soon as they are acquired. Both items are finally carried into expense accounts. The essential difference lies in the time at which the expense elements are recognized.

This distinction between the purchase of a building and ultimate allocation in the Depreciation expense accounts and the purchase of services brings out the significant characteristics of an expense item. The expense element arises from the fact that something has been *consumed* or used up and that it disappears from the assets. It is not the *purchase* of the services that constitutes an expense, but the fact that the services have been *consumed*. For example, a telephone bill is paid. It is not the payment that causes the expense, but the fact that the telephone services—an essential element in the conduct of the business—have been used and can no longer be considered as an asset.

Expenses, then, indicate the expiration or consumption of property items. Expense accounts represent the various forms of property and classes of services that have been purchased and used up in the operation of a business. If an expenditure is made for services already consumed or which will be used in a very short time, the amount is charged immediately to an expense account. If, on the other hand, an expenditure is made for something which will not be consumed within a fairly short period of time, it is charged to an asset account, first, and is

transferred to an expense account at such time as it is known that the item has been used up.

9. *Classification of expense accounts.*—The expenses of a business may be classified into four main groups. The first group includes those expenses which represent the cost of goods sold. In a manufacturing concern this includes the raw materials used in the process, the labor expended directly on the product, and any other expenses that arise in connection with the operation of the factory. In a trading enterprise, it includes the cost of merchandise sold.

The second class of expenses are those incurred in the selling of the commodity. They include salesmen's salaries, commissions, advertising, etc. These two classes of expenses should be divided into the same general account groupings as those for sales, so that the selling profit may be obtained for each line of product.

The third group of expense accounts includes the general administrative expenses of the business. These are not usually subdivided according to the sales classification, because they are incurred for all products in general and cannot be apportioned on a logical basis. This group includes such items as officers' salaries, office expenses, and other items usually termed "general overhead."

The fourth group includes those items of expenses or loss that have to do with the financial affairs of the organization. Such items as interest paid and

discount on notes are typical of this group. These are separated from the other expenses on the ground that they pertain more to the method of financing the concern than to the actual operation of the enterprise.

The financial expense items may be compared with the group of income accounts of a similar type. Payments for interest may be considered as net deductions from net worth in the same way as receipts of interest are net additions. A comparison between interest income and interest expense is significant in analyzing the financial policy of a concern.

10. *Special profits and losses.*—There are occasions when profits are obtained from sources in no way connected with a firm's regular business operations. A profit on the sale of a permanent asset, such as a building formerly used for manufacturing purposes, or a profit on the sale of land are illustrations of this type of income. A concern might have its property appraised and find the value of its plant and equipment higher than the balance in the asset accounts. If the new values are entered on the books, a profit must be recognized that is not a part of the ordinary operations of the business.

All of these unusual profits are credits to net worth accounts, yet they do not come within the general class of income accounts that have been described. They may be credited either directly to the net worth accounts of the proprietor, or entered, first, in special accounts indicating the particular

character of the profit. There could be no classification of unusual profit accounts for obvious reasons. If a profit is unusual, it cannot be anticipated in an account title.

A concern sometimes suffers a loss that is not a normal expense outlay. It is the cause of a reduction in net worth, yet it does not represent a consumption of property incidental to ordinary business operations. A piece of property may become worthless, due to some cause not even remotely connected with the firm's own business. A sudden change in the level of prices necessitates a downward revision of the asset values. The firm suffers a loss from fire that was not entirely covered by fire insurance. Some of the investments in securities become worthless. These are all unusual losses that do not come within the definition of an expense. They constitute a direct loss of capital and may be charged directly to the net worth accounts. It is preferable, however, to open a separate account for each type of unusual loss.

11. *Net worth.*—The proprietor's equity in the business is called the net worth. At the time a business is started, the investment of the proprietor is credited to his Net Worth or Capital account. Any addition to, or subtraction from, his equity, as determined by the balances of the various expense and income accounts, is entered in his Net Worth account, on the appropriate side, before the balance sheet is prepared. At the end of each year, or other account-

ing period, the total net profits are lumped into one sum and transferred to the Net Worth account.

In the case of a sole proprietorship, the net worth is carried in one account under the owner's name. In a partnership, it consists of a group of accounts, each representing the equity of an individual partner. The net worth accounts of a corporation are more complicated, as they involve the capital stock issued to the stockholders and accumulated surplus. Surplus may be still further subdivided into special reserves, appropriations of the board of directors, and undivided profits. These are all parts of the net worth, which represent the stockholders' equity in a corporation. These accounts will be considered more fully in Chapter XIX.

12. *The summary account for expenses and income.*—In the preceding discussion, emphasis has been placed upon the importance of setting up a sufficient number of accounts, properly labeled, to indicate the nature of the particular expense or income element involved. It is necessary at the end of each accounting period to summarize and bring together in one place all of the balances in these accounts, so the final net profit figure may be obtained. This is done by closing the balances of all accounts showing expenses or incomes into one account. Various titles have been applied to this account in actual practice, the most common being Income account or Profit and Loss account. We shall use the term "profit and loss" to apply to this account.

The Profit and Loss account appears on the books only during the time of closing the books at the end of each accounting period. It is used simply as a means of computing net profit to be carried to the net worth accounts. All of the Expense account balances are carried to profit and loss by journal entries, which debit the Profit and Loss account and credit the expense accounts. All income accounts are likewise carried to the Profit and Loss account, being debited, and the Profit and Loss account credited, for the amount of the balances in these accounts. The excess of credits over debits in the Profit and Loss account represents the net profit for the period. An excess of debits over credits would represent a loss. The balance in the Profit and Loss account is closed out by a journal entry, being transferred to the net worth accounts.

13. *Personal and impersonal accounts.*—The several types of accounts that have been mentioned in this chapter—asset, liability, income, expense, and capital or net worth accounts—are the standard groupings of accounts found in every accounting system. This classification is based upon the functions of the several types of accounts and is sufficient for all practical purposes. There are certain other classifications which, although of some academic interest, are not essential to an understanding of the accounts usually found in modern accounting systems.

One of these distinctions is between personal and

impersonal accounts. This classification dates back to the days when accounts were kept only with persons. When the double entry system was introduced, it was necessary to open accounts to represent items other than individuals. This was, at the time, the basis for the distinction that is still mentioned in some classifications of accounts. A personal account is any account that expresses a relationship (debtor or creditor) with an individual, whereas an impersonal account is one that relates to an inanimate thing, such as cash, buildings, sales expenses, etc. In so far as modern accounting processes are concerned, personal and impersonal accounts are handled in the same way.

14. *Real and nominal accounts.*—Another distinction sometimes drawn, in speaking of accounts, is their separation into real accounts and nominal accounts. The real accounts are the assets, liabilities, and the net worth or capital accounts. They are the accounts that are permanent in the sense that they usually have balances carried forward from one accounting period to the next. That is, they are the accounts that appear upon a balance sheet statement.

The nominal accounts are those that represent incomes, expenses, profits, and losses. As a rule, these accounts are closed at the end of each accounting period and have no balances to carry forward. In this sense, they are not permanently carried on the books. They are set up solely to analyze the changes that take place in proprietorship.

There is no fundamental basis for this use of the words *real* and *nominal* to distinguish these groups of accounts. There is reality to both of them. The custom of referring to them in these terms, however, is sufficiently widespread to justify a reference to them here. It has no direct connection with accounting processes or with the interpretation of accounting statements.

15. *Summary of account classifications.*—An understanding of the account groups which have been discussed in this chapter is essential to one who makes use of accounting records for management purposes. If a person is able to grasp the significance of the main classes of accounts, and to assign each item in an accounting statement to one of the groups, he will have little difficulty in interpreting the data set forth in terms of business operations. The following is an outline of the standard account classifications that can be expanded to fit the needs of any business:

(a) Income accounts
  (1) Sales of product subdivided into types of goods, territories served, or in any other way that is desired
  (2) Sales of by-product
  (3) Other incomes, such as interest, discount, dividends received, etc.

(b) Expense accounts
  (1) Labor
  (2) Materials
  (3) Supplies

(4) Selling expenses, classified in as great detail as is required to give a separate account for each class of transaction

(5) General expenses, including administrative expenses, such as officers' salaries not distributable to any special division, etc.

(6) Profit and loss charges for items of unusual expense or loss, which are not a part of the operating cost of the business

(c) ASSETS

Separate accounts for each type of asset so that there may be no miscellaneous groupings of assets owned

(d) LIABILITIES

A complete separation of liabilities by accounts which will designate each class of liability

(e) NET WORTH

A sufficient subdivision of proprietorship so that if there is more than one proprietor the interest of each will be separately classified.

REVIEW

Show why the selection of account titles is an important matter.

In what way does the executive use a detailed classification of expense and income accounts?

Show by use of an illustration how the inventory is used to determine the cost of goods sold.

Give an illustration of an item of income for which no specific expenses are incurred.

Give a classification of expense accounts.

What is the relationship between the Profit and Loss account and the Net Worth account?

CHAPTER IX

ACCRUALS AND PREPAYMENTS

1. *Significance of the accounting period.*—The balance sheet of a business enterprise is supposed to represent its true financial condition on a certain stated date. Many corporations publish balance sheets, prepared from their books, at the end of each fiscal year. Such a statement will be headed something like this:

THE ROLLINS COMPANY
GENERAL BALANCE SHEET
As of June 30, 1930.

The fiscal year in this case ends on June 30, and a comparison may be made with the balance sheet for the same date in 1929.

The income sheet, or profit and loss statement as it is generally referred to, covers the period of time between the two balance sheet statements. It accounts for the amount of income received during that period, the expenses incurred, and the amount of profits. It explains the causes for change in the net worth figures on the balance sheet. The heading of such a statement would be as shown at the top of page 143.

THE ROLLINS COMPANY
STATEMENT OF INCOME AND PROFIT AND LOSS
For the Fiscal Year Ending June 30, 1930.

The concept of an accounting period is of particular significance in the preparation of both the balance sheet and the profit and loss statement. A series of balance sheets may be compared to mile posts in the progress of a business, from the date of its organization throughout its entire life. These posts are placed at equal intervals, the distance between them being the length of an accounting period. The profit and loss statement is a narrative describing important features of the territory between the posts. Each profit and loss statement is a complete narrative in itself. It begins at one post and ends at the next. An entirely new profit and loss statement begins at each balance sheet date. It is important, therefore, to make sure that the information contained on a profit and loss statement pertains exclusively to the particular accounting period involved. There should be no income or expense items carried over from preceding periods, and none of those for the current period should be left over to be recorded in the next one. However, sometimes it is necessary to adjust prior period items in the current period, but such adjustments should be distinctly indicated on the statement. Many of the problems of accounting analysis arise in connection with the attempt to maintain the integrity of the accounting period.

2. *Cash basis.*—Some organizations keep their records on the *cash basis* instead of the *accrual basis.* That is, only those transactions are recorded that involve values and that have been completed by the actual transfer of cash or its equivalent. In other words, payments of salaries would be charged to expenses of the period in which the payment was made, regardless of the time when the services were rendered. A payroll might be paid on the fifth of July for services rendered in the month of June. If accounts were kept on the cash basis, no record would be made in the expense accounts for June, although the services would have been used in producing the goods sold in that month.

Interest on bonds is usually paid twice a year. If the accounts are kept on the cash basis, interest is charged on the date of payment even though that date may be shortly after the close of an accounting period. Suppose, for example, that a corporation has outstanding $1,000,000 of 6% bonds, with interest payable on January 15 and July 15. The books are closed and statements prepared on June 30. Fifteen days later, a total of $30,000 is paid for interest that had accrued during the preceding six months. Only a small part of this payment pertains to the period after June 30, yet the entire amount is charged to the Interest account on July 15. It is clear that this practice distorts the statement of net profits for both periods.

It is argued in support of the cash basis that it

is simple and avoids the complication of computing accruals. Furthermore, it is claimed that there are usually just about the same number of adjustments to be made at the end of each year, so that if they are all ignored, the books will always be off by approximately the same amount. These arguments are not sufficient to justify the maintenance of accounts on a basis that is illogical and produces inaccurate statements of income and expense.

When an executive examines the records of business done by his organization during any given period, he wants to know the true income and expenses and the financial condition at the end of the period. He cannot be sure of the true state of affairs, if the statements are prepared from accounts maintained on the cash basis.

3. *Accrual basis.*—As opposed to the cash basis of keeping accounts, most business organizations have adopted the *accrual* basis. Under this plan, the records are made to show the results of all transactions as they affect the statements for an accounting period. Expenses incurred in a given period are recognized in the accounts, whether actually paid for in that particular period or not, and the items of income earned during the same period are recorded, whether received or not.

Accruals are brought into the accounts after the trial balance for a period has been prepared. The trial balance shows the condition of the accounts after the ordinary business transactions have been

recorded. These include only the completed transactions that have taken place since the beginning of the period. Certain of the account balances, therefore, must be adjusted to recognize expense and income accruals.

4. *Cash basis adequate for certain types of institutions.*—Our criticism of the cash basis for keeping accounts pertained to the records of business organizations. Private business is organized for the purpose of making profits on its transactions and a fair return on the capital invested. In order to utilize his resources most effectively, the business man needs information concerning certain relationships, such as the proportion of income to capital and of expenses to revenues. Unless there is a direct connection between the income recorded and the expenses assigned to it, the accounting records are of little value. The problems of the executive are concerned with the amounts of income earned and expenses incurred, rather than with the amounts of cash received and cash disbursed.

In the case of public corporations, however, the situation is somewhat different. State and local governments are not normally conducted for profit. Revenues are obtained by means of taxation in amounts sufficient to cover the disbursements which have been approved by the proper authorities. The primary purpose of public accounting is to show cash received and disbursed. Accruals of income and expense are not significant in the control of public

affairs. The cash basis has been employed by municipal governments because it accomplishes all the results desired more easily and simply than any other method.

Charitable institutions, fraternal societies, and similar organizations, not conducted for profit, frequently operate their accounting records on a cash basis, since that method gives them all the information they require, inasmuch as their expenditures are limited by their cash receipts.

5. *Normal accounting routine.*—In a large accounting office, the routine of recording day-to-day transactions is developed to machine-like precision. The classification of transactions into their debit and credit elements is carried out almost automatically. It is impossible to maintain an absolutely clear-cut distinction between asset and expense accounts in the mechanical recording process. At the time of recording transactions, some items are classified as expenses which, on the basis of strict analysis, should be treated as assets. They are entered in expense accounts, either because the expense element is predominant, or because the items purchased will be consumed in such a short period that they may be considered expenses immediately.

The purchase of supplies is a case in point. Supplies on hand obviously are assets, but they are consumed in quantities just about equal to the amounts being purchased currently. The total charged to the Supplies account during an accounting period repre-

sents, for the most part, the cost of supplies which have already been used. The Supplies account, therefore, may be classified as an expense account, even though there are still some items on hand that should be counted among the assets for balance sheet purposes.

In some cases, customers pay for goods or services in advance of delivery. In the ordinary recording process, these advances are credited directly to the appropriate income accounts. At the time such a transaction takes place, however, the amount of such advances is in reality a liability, for the customer has a legal claim upon the concern for the delivery of the goods.

No provision is made in the ordinary recording process for distinguishing between income that has been earned and income received before it is earned, or between expense items purchased and those already consumed. Consequently, if the accounts are to be maintained on the accrual basis, it is necessary to examine all of the income and expense accounts at the time the financial statements are prepared.

An illustration will serve to emphasize the importance of recognizing accruals in the accounts. Let us assume that the sales of a concern during the month of March amounted to $50,000 and were recorded as income of that month. The salesmen's salaries, amounting to $500 are paid regularly on Saturdays. Payments were made on March 5, 12,

19, and 26, making a total of $2,000 for the month. If no adjustment were made in the Salary Expense account, the net income for the month of March would be overstated.

There were four working days for which salaries had not been paid within the month, although the sales for the same days were included in the income for the month. At the rate of $500 per week, this would amount to $333.33. The payroll for the first week in March included payments for salesmen's services rendered on February 28, and the amount, $83.33, should have been charged in that month. This would leave a net understatement of expenses for March of $250, and an overstatement of profits of the same amount.

The cash method of recording salary payments would also have a serious effect upon the statement of net profit for the month of April. There would be five pay days falling on April 2, 9, 16, 23, and 30. The total cash payments for salaries, therefore, would be $2,500. The understatement of expenses in March would be offset by the overstatement of expenses in April. If the manager were using his accounting records for control purposes, he would be misled by these statements. The amount of salaries accrued, but still unpaid, on March 31, should be recorded on the books before the statements for that month are prepared. This is accomplished by the use of the accrual method.

A somewhat different situation arises when an ex-

pense charge is made for services which will not be rendered until a later period. An expense is incurred when something is consumed, directly or indirectly, in producing sales. It is the time of consumption that determines the allocation of the charge and the act of consumption that creates the expense. The time of payment is immaterial, except as it affects the financial condition.

As a case in point, we shall assume that a concern purchased, in May, $500 worth of circularizing literature to be used as a part of a sales campaign to be instituted in June. Under the cash basis of keeping records, this $500 would be treated as an expense of the month of May, although this literature had no part in producing the sales of that month. It would be consumed in June, and would properly constitute a part of the cost of making sales in June or subsequent months.

6. *Adjustments in accounts.*—It is because of inaccuracies similar to those we have just described that adjustments must be made in the accounts at the end of each accounting period. This plan of accounting is rather difficult to master, but it is of great importance. The several adjustments are a necessary part of the accountant's work, if his records are to be brought into conformity with the facts as they pertain to a particular accounting period. Consequently, after the trial balance has been prepared, the income, expense, and liability accounts will be examined and valued. Appropriate adjustments will

be made in those which do not contain balances representing the true condition of the business.

The adjustments to be made may be classified as follows:

(a) Expenses incurred but not recorded
(b) Expense items recorded, but consumption deferred until a subsequent month
(c) Income received and recorded, but not earned in the month in which record is made
(d) Income earned but not recorded.

7. *Accrued expense.*—Even though every possible effort is made to put through all invoices promptly, and to make salary payments within the month in which services are rendered, there are always a number of such charges outstanding at the end of a month. It is necessary for the accountant, therefore, to make a careful examination of the expense accounts in order to locate any expenses which may have been incurred but which have not previously appeared on the records. Bills that come in after the end of the month should be recorded by adjustment entries, which will be explained in the next chapter. If bills are not received, but a definite liability is known to exist, entries should be made just the same as if the bills had been rendered.

Salaries due but not paid at the end of an accounting period are typical of expense accruals. Employees are usually paid on certain set days, which do not generally coincide with the end of calendar months. In such instances, there will be a few days'

pay due to the employees at the end of the month. This was the case in the illustration given earlier in this chapter.

Another type of expense accrual arises in connection with electric light and power bills. The power company does not always provide meter readings on the last day of each month. If the expenses for a month are to be accurately computed, it is necessary to take into account the amount of power consumed from the date of the last meter reading to the end of the month. This can be done by taking meter readings or by estimating the amount consumed.

8. *Material received but not recorded.*—It frequently happens that certain merchandise is received and put in stock, for which invoices have not yet been recorded at the end of that month. If this merchandise is included in the inventory of stock on hand, as would normally be the case, it would be deducted from the expense charged on the books in computing the cost of goods sold. This, however, would incorrectly reduce the record of cost of goods sold.

For example, suppose that the records showed purchases of $10,000 and inventories of $2,000 and $3,000 at the beginning and end of the period, respectively. From the records, the cost of goods sold is $9,000, i.e., $10,000 plus $2,000, the opening inventory, and minus $3,000, the closing inventory. The true result would be quite different, however, if $1,000 of goods received toward the end of the

month had been put in stock and included as a part of the $3,000 inventory, but no bill had been entered and no record made in the Purchases account. In other words, a deduction would be made from the recorded purchases for an item that had never been included in the Purchases account.

There are numerous other charges which normally affect the business of each month, but which are not always entered as a part of the regular accounting procedure of that month. Bills covering light, freight and cartage, etc., will frequently be received too late to be included in the regular records for the month. These bills should all be recorded by means of the special adjustment entries to be explained later. The accounts to be charged are the specific expense accounts involved. There is no definite liability account open on the books which can be directly credited, and hence it becomes necessary to open a new account for these accrued items.

Because the opening of a new account for every such item means considerable clerical work, it is customary to credit the total of these adjustments in one lump sum at the end of the month to one account, which is usually called "Accrued Liabilities." This account, as its name implies, includes the adjustments that have been made at the end of the month in order to get into the records of that month's business all charges that have not been made in the regular way. The result of this method is exactly the same as if separate accounts had been opened.

9. *Other accrued liabilities.*—Thus far we have discussed only those liabilities that are payable at the close of the month, or shortly thereafter. There is, however, another class of accrued liabilities that is frequently overlooked. Certain types of expense must be paid which increase with the lapse of time until the date of payment becomes due. Thus, for example, interest and taxes are definite obligations which legally accrue from day to day, creating an increasing liability that amounts, upon maturity, to the face value of the liability to be paid at that time.

Assume, for the moment, a business that has outstanding a mortgage of $100,000, on which six per cent interest is being paid. At the date for payment of interest, the total disbursement in cash amounts to $6,000. It is not to be thought that this $6,000 liability does not arise until the date on which interest is to be held. Interest accrues from day to day and, if the business were sold, or if the mortgage were transferred, the interest accrued up to the date of sale, or date of transfer, would be added to the face value of the mortgage.

Furthermore, it is incorrect to assume that the business transacted in the month in which this payment is actually made is to be charged with the total cost of the mortgage interest. The asset subject to this mortgage is being used in the business throughout the year, and any part of the cost of maintaining the asset should be apportioned over the months in which the asset is employed. If the interest were

$6,000, the proportion for each month would be one-twelfth, or $500.

Taxes are also calculated once a year, but they should be apportioned to the expense accounts each month. It is usually possible to estimate fairly accurately the amount that will be charged. At the end of each month, a charge is made to the Taxes account (an expense) and a credit to Taxes Accrued (a liability) for one-twelfth of the estimated amount of taxes for the year.

When the taxes are paid, the Taxes Accrued account is charged and Cash is credited. If the original estimate proves to be correct, this entry will close the Taxes Accrued account. In case there is a difference between the estimate and actual, an adjustment is made in the expense charge of the last month. This, of course, causes the tax expense charge for one month to be slightly out of line. This is not as serious, however, as it would be to charge the entire cost against one month.

10. *Deferred assets.*—Whenever an adjustment is made in an Expense account, the effect of which is to carry a balance forward into the next accounting period, it is necessary to list the item on the balance sheet. Such items are variously referred to as "deferred assets," "deferred charges," "contingent assets," or a "deferred charges to expense," and are grouped separately in the balance sheet. Suppose, for example, that a firm had paid its rent on May 1, for three months in advance, the amount being

$900. If the books were closed on June 30, there would still be one month's rent, $300, to carry forward. The original payment of $900 would appear as a debit in the Rent account, $600 would be charged as an expense, and $300 would be carried on the balance sheet for June 30 as a deferred asset. Another method of handling this same transaction would be to charge the $900 to a Prepaid Rent account and transfer the monthly proportion to an Expense account as the current month expired.

This class of item differs from most of the items that appear on the asset side of a balance sheet. It is a valuable right, but it does not exist as a tangible asset or as a claim for future payment. The firm secures the benefit by using the building during the month of July. It cannot be counted either as a fixed asset, comparable to buildings and machinery, or as a current asset, like cash, merchandise, or accounts receivable. It is an expense which has been deferred to a later accounting period.

Another account which is treated in a similar manner is advertising. Sometimes advertising space is paid for in one month that will not be used until a later period. It would be inaccurate to charge the amount paid for advertising in June as an expense of that month, if the services were to be rendered in later months. At the time the statements are prepared on June 30, the cost of the advertising space that has not yet been used would be treated as a deferred asset. At the end of July, or the next time

the statements are prepared, that part of the cost which represents the services rendered during the period would be transferred from the Deferred Asset account and charged as an expense.

The balance of the Advertising account (carried on the balance sheet as a deferred asset) would represent the unconsumed or unexpired rights to service. An asset of this sort cannot be converted into cash because there is no claim for payment from the advertising agency and the claim is not subject to sale. It can only be realized upon by accepting the services.

11. *Other prepaid items.*—There are a great many transactions which give rise to deferred asset adjustments, such as prepaid insurance premiums, stationery and printing materials purchased in quantity lots, and business licenses paid for a year in advance.

The question may arise as to the propriety of including such an item as stationery, which has no salable value, in the assets. Certainly printed materials and letterheads would be of no value to any other than the concern to which they belong. The fact that such items cannot be sold or otherwise transferred, however, does not mean that they are not of value to the concern. Any payment for materials or services which will be of use over a period of time has an accounting value to the concern until the items have been consumed.

The fact that these expenditures reduce the payments that would have to be made in the succeeding

periods means that the business has an asset that is worth as much as the amount of the savings thus affected. There is no other way in which such expenses may be allotted to the periods in which they are incurred, except through a recognition of such asset values.

12. *Income received in advance.*—There are some types of business that receive payment from customers in advance of the delivery of the commodity or service sold. A publishing house, for example, secures subscriptions to the magazines which it publishes for one, two, or more years in advance. The subscribers have a claim against the publisher for the regular delivery of the periodical. This claim is a deferred asset from the standpoint of the subscriber, but it is also a liability of the publisher.

It would seriously distort the statement of profits, if the amount received for subscriptions were credited immediately to an income account at the time of receipt. Suppose, for example, that in the month of January, subscriptions amounting to $50,000 were received on a yearly basis. If a balance sheet were prepared the following June 30, the publisher would still be liable for $25,000 in unexpired subscriptions. This amount should be carried as a liability in the balance sheet, as a deferred credit to income.

An amusement company may sell season tickets, which are good for a certain number of attractions. The unused coupons are liabilities that should be entered as such on the balance sheet. The gross in-

come from sale of tickets in any period would be measured by the number of canceled tickets.

Another illustration of this type is the sale of commutation tickets by certain transportation companies. The tickets that have been sold, but not presented by the patrons, are liabilities of the company.

These are all classified in the accounts as *deferred income,* and carried on the liability side of the balance sheet. At the end of each accounting period, an inventory is taken of the claims for service still outstanding. The amount of these claims is charged against the Sales account (or other income account) and credited to Deferred Income. As the service is rendered, Deferred Income is debited and the appropriate Income account is credited.

13. *Income earned but not received.*—Cases in which income has been earned, but collection of the amount in cash has not been made, are the opposite of those mentioned in the preceding section. The accrual of interest on a mortgage or bond is a case in point. A corporation that owns bonds with a face value of $100,000, bearing six per cent interest, would have an annual income of $6,000 from that source. If the interest were payable, as is customary, in semiannual installments, there would be two months in the year in which lump sums of $3,000 would be received in cash. The income on the investment, however, accrues over the year at the rate of $500 per month. At the time of closing the books

at the end of any month, there would be an asset in the form of interest earned but not received. If the last semiannual amount had been received on April 30, and the books were closed on June 30, there would be an accrual of $1,000 to be entered on the books.

The amount of interest accrued each month should be charged to an account entitled "Accrued Interest Receivable" (an asset account) and credited to "Interest," or "Interest Earned" (an income account). At the time the cash is received for interest, the debit would be to Cash and the credit to Accrued Interest Receivable.

14. *Summary.*—The adjustments which have been discussed in this chapter arise from the fact that accounting periods do not exactly coincide with completed business transactions. One of the chief functions of accounting is to represent a true picture of the changes in financial condition for a stated period of time—a year, a quarter, or a month. In an effort to keep the accounts representing income and expenses in strict conformity with the facts, it is necessary to make a number of adjustments to bring into the records certain accruals and prepayments.

It should be noted that, for every adjustment in an income or expense account, there is of necessity a similar adjustment in an asset or liability account. In order that these adjustments will not affect the principal classes of assets and liabilities, separate classifications of accounts are used.

After all of the accruals and prepayments have

been taken into consideration in the accounts, the adjusting entries may be made and the statements prepared. This process will be explained in the following chapters.

REVIEW

Distinguish between the cash and accrual basis of keeping accounts.

Give an illustration of an expense accrual.

Give an illustration of an adjustment due to the fact that bills were not received until after the close of the month.

Explain how tax accruals are recorded.

Give an illustration of prepaid income.

Explain how interest accrued on investments should be recorded.

CHAPTER X

ADJUSTING ENTRIES

1. *Closing the books.*—When all of the adjustments have been made in the ledger accounts for accruals and prepayments, the books are closed and the statements are prepared. The term "closing the books" is a technical expression pertaining to the accounting procedure at the end of each accounting period. It involves the process of bringing the adjusting entries into the accounts, carrying all expense and income balances into the summary Profit and Loss account, and the final balance of net profit to the Net Worth account. There are several steps in this process that require detailed explanation.

It will be convenient, in explaining these processes, to refer once more to the simple set of transactions illustrated in Chapters V and VI. The trial balance for the business of A. Roberts, whose books were kept in this exercise, was given at the end of Chapter VI. It will be recalled that this statement showed the balances as they appeared in the ledger on February 28, after all of the business transactions for the first two months of the year had been recorded, but before any adjustments had been made. The various types of adjustments that are commonly made

in the accounts were discussed in Chapter IX. We may now make certain assumptions concerning the records of A. Roberts, and proceed with the necessary adjusting entries.

2. *List of adjustments to be made.*—In order to prepare the journal entries for the adjustments, it is desirable to proceed in a systematic manner. Immediately after the trial balance has been prepared, the accountant starts a searching examination of each account to determine whether the balance correctly states the condition of the item it represents. He gets the necessary information from various sources outside of the book records. We will assume that an examination of the trial balance of A. Roberts reveals the following facts:

(a) Some merchandise purchased from King and Company had been received and placed in stock on February 28, but the invoice, amounting to $2,000, had not been received.
(b) An inventory of merchandise was taken at cost prices. This amounted to $5,872.
(c) Salaries were paid on February 25, leaving two days to be accrued at the end of the month, amounting to $43.33.
(d) The payments for advertising covered some materials still on hand at the end of the month, amounting to $50.00.
(e) The insurance premium paid in January was for one year's protection.
(f) Interest accrued on notes receivable amounted to $7.17.
(g) Interest accrued on notes payable amounted to $15.63.

3. *The working sheet.*—Before closing their books or preparing the financial statements, many accountants prefer to summarize the trial balance, and the adjustments made after the trial balance is drawn off, on a working sheet in which they can allocate all accounts according to their nature and thus group separately the income and expense accounts and the asset, liability, and net worth accounts.

In the books of the ordinary concern where the number of accounts and transactions are not many, this procedure is probably unnecessary, since the statements can be constructed directly from the trial balance together with a list of adjustments. However, in order to give the reader an opportunity to see just how the working sheet is used in actual practice, we will illustrate it here in preparing the financial statements for the business of A. Roberts.

If the statements are prepared without the use of a working sheet, then the original trial balance, together with a list of adjustments, forms the basis of the statements, and the procedure followed is identically the same as that to be discussed here, except that each account and adjustment is transferred directly to the statement instead of being previously classified in the working sheet. When the working sheet is used, the separation of accounts as between the profit and loss statement and the balance sheet is clearly set forth, and the work of preparing statements becomes only that of properly grouping accounts within the statement itself.

There are various ways in which to prepare the form of the working sheet. In a less detailed form, it contains eight money columns, which are classified into four separate groups of one debit column and one credit column each. The first two columns contain the accounts in the trial balance which is drawn off after the transactions for the accounting period are completed. The next two columns to the right are the debit and credit columns in which the adjustment entries are posted.

Columns five and six contain all of the accounts which contribute to the profit or the loss for the period, and the last two columns contain the balance sheet items. It readily can be seen that, after the last two groups of columns have been properly extended, the task of drawing up the income and profit and loss statement and the balance sheet is made much easier. This form of working sheet is illustrated on page 166.

For the purposes of illustration, in connection with preparing the statements for the business of A. Roberts discussed in previous chapters, we will use a working sheet that is somewhat different from the one mentioned above. This working sheet is prepared merely to handle the adjustments to arrive at the adjusted trial balance, and is shown on page 168. The trial balance is listed in the first two money columns, just as it is taken from the accounts in the ledger, showing the debit and credit balances. The next two columns contain the adjustments made after

A FORM OF WORKING SHEET

		Trial Balance Before Adjustments		Adjustments		Profit and Loss Items		Balance Sheet Items	
Folio	Accounts	Debits	Credits	Debits	Credits	Debits	Credits	Debits	Credits

the trial balance is drawn off. All of the adjustments necessary to correct the accounts are entered opposite the names of the accounts affected, in the appropriate debit or credit column. (For purposes of identification, each entry in this group of columns has been lettered to aid in identifying the items in the discussion in the following sections.)

Whenever it becomes necessary to make an entry for an account that does not appear in the trial balance, the title is listed below those already shown.

The last two columns are for the trial balance after adjustments have been made. The list of account balances should show the condition of each account as used for financial statement purposes.

We will now consider the adjustments listed in Section 2 of this chapter.

4. *Merchandise adjustments.*—The first adjustment, lettered (a), calls for a debit to Merchandise of $2,000 and a credit to King & Company for the same amount. This brings into the merchandise account the invoice of King & Company that was not received until after the trial balance was prepared. Since the merchandise covered by this invoice was in stock and was counted in the inventory, it is necessary to include the amount before computing the cost of merchandise sold.

The second adjustment (b) is made for the purpose of clearing the Merchandise account of the cost of goods sold. An entry is made debiting "Cost of Goods Sold" and crediting "Merchandise" with $40,-

WORKING SHEET FOR ADJUSTMENTS

L. F.	Accounts	Trial Balance Before Adjustments		Adjustments		Adjusted Trial Balance	
		Debits	Credits	Debits	Credits	Debits	Credits
1	A. Roberts—Net Worth		$10,000 00				$10,000 00
1	A. Roberts—Drawing Account	$ 900 00				$ 900 00	
2	Cash	14,665 23				14,665 23	
5	Furniture & Fixtures	500 00				500 00	
25	Notes Receivable	2,280 00				2,280 00	
30	Merchandise	44,564 79		(a) $ 2,000 00	(b) $40,692 79	5,872 00	
31	Notes Payable		16,484 79				16,484 79
32	Discount on Notes	33 87				33 87	
35	Sales		46,014 26				46,014 26
39	Discount on Sales	293 19				293 19	
40	Discount on Purchase		624 00				624 00
43	Office Salaries	920 00		(c) 43 33		963 33	
44	Advertising	383 70			(d) 50 00	333 70	
45	General Expense	119 14				119 14	
46	Freight Expense	146 44				146 44	
47	Printing	42 60				42 60	
48	Rent	600 00				600 00	
49	Insurance	159 38			(e) 132 82	26 56	
50	Commissions	741 15				741 15	
51	Interest	11 66		(g) 15 63	(f) 7 17	20 12	
52	Loss on Uncollectible Accounts	381 40				381 40	
61	B. Eckert & Sons	1,950 00				1,950 00	
65	M. Phillips	2,902 50				2,902 50	
71	F. Peters & Bro.	1,060 00				1,060 00	
77	Peabody & Longman	468 00				468 00	
		$73,123 05	$73,123 05				
72	King & Company				(a) 2,000 00		2,000 00
53	Cost of Goods Sold			(b) 40,692 79		40,692 79	
54	Salaries Accrued				(c) 43 33		43 33
55	Prepaid Advertising			(d) 50 00		50 00	
56	Prepaid Insurance			(e) 132 82		132 82	
57	Accrued Interest on Notes Receivable			(f) 7 17		7 17	
58	Interest Accrued on Notes Payable				(g) 15 63		15 63
				$42,941 74	$42,941 74	$75,182 01	$75,182 01

692.79. The amount of the entry is determined by deducting the inventory from the total debits in the Merchandise account. In the adjusted trial balance, the Merchandise account shows a debit balance of $5,872.00, representing the asset value of goods on hand. The Cost of Goods Sold account has a debit balance of $40,692.79, which is an expense item.

5. *Salaries accrued.*—The debit balance of $920 in the Office Salaries account does not cover the entire cost of the services rendered in the two months covered by the trial balance. There was an accrual of two days' pay at the end of the month which will be included in the next payroll. In order to get the amount ($43.33) into the accounts, an adjusting entry debiting Office Salaries and crediting Salaries Accrued is made. The adjusted trial balance shows the former account with a balance of $963.33, representing the expense for the period, and the latter with a credit balance of $43.33, representing a liability.

6. *Prepaid advertising.*—The Advertising account has a debit balance of $383.70. This is made up principally of expense items, but there were materials on hand still to be used that cost $50.00. The actual expense to be charged for the period is less than the account balance and a credit of $50 must be made to the Advertising account. Therefore, a new account called "Prepaid Advertising" is debited with $50 to represent the asset element involved, and the Advertising account credited. The net expense for adver-

tising is shown in the adjusted trial balance at $333.70 and the deferred asset covering the unused materials is listed at $50.00.

7. *Unexpired insurance.*—Insurance premiums are paid in advance, hence the debit balance in the Insurance account contains both asset and expense elements. The premium paid by A. Roberts covered the insurance protection for one year. One-sixth of the premium had expired on February 28, and the balance of the cost should be transferred to a prepaid expense account. The debit entry to record this adjustment is made to an account entitled "Prepaid Insurance," for $132.82, and a credit of the same amount is made in the Insurance account.

8. *Interest accruals.*—An examination of the Notes Receivable and Notes Payable accounts shows that certain amounts of interest have accrued in favor of and against the firm. The amount that had accrued on notes receivable up to February 28 was $7.17. This is an additional income that should be credited to the Interest account and debited to the account, "Accrued Interest on Notes Receivable."

A total of $15.63 in interest has accrued on the notes payable. This is an addition to the interest expense and is, therefore, a debit to the Interest account. The same amount is a liability of the enterprise on February 28, and is credited to the account, "Interest Accrued on Notes Payable."

It will be noted that in referring to the accrued interest on notes receivable, the account has been

entitled "Accrued Interest," whereas, in referring to the accrued interest on notes payable, the account has been entitled "Interest Accrued." It really makes no difference as to the sequence of these words in the account titles, when they are followed by such explanatory words as "on Notes Receivable" or "on Notes Payable." But, in some cases, the titles are not always explicit and, in the first case, where the word "Accrued" comes first, the fact that the account title begins with an "A," the same as "Asset," is a help to remember that the account is an asset account.

In connection with the "Interest" account, it will be noted that both the expense and income elements were entered in the same account. A separate account for each element might be kept, in which case one would show cost of interest on borrowed money and the other the income from loans extended to others. This is frequently done. In this illustration, however, only one account was used to show one form of a mixed income and expense account. The debit balance in this account ($20.12), after the adjustments are made, is the excess of interest expense over the interest income for the period. This is a significant figure in analyzing the financial operations of a concern.

It will be recalled that on January 20, Mr. Roberts discounted his note for $4,000 at the bank, and that a certain amount was charged to discount on notes. In adjusting items of this nature, it is proper to prorate such expenses over the period of the loan.

In this case, then, we should transfer that part applicable to the balance of the period of the loan to a prepaid expense account. However, such an adjustment would be similar to those already handled, and it is omitted here.

9. *Journalizing the adjustments.*—It is necessary, of course, to make journal entries for the adjustments discussed. These entries are then posted to the working sheet so that the accountant may go ahead with the preparation of the financial statements. Later, these entries are posted to the appropriate ledger accounts. The entries for the adjustments appear on page 173.

10. *Adjusting entries posted.*—After these entries have been posted to the ledger, the account balances will correspond with the amounts shown in the adjusted trial balance columns of the working sheet shown on page 168. There are twelve accounts involved in this illustration. In a large enterprise, the adjustments might run into the hundreds. A sufficient number have been given, however, to indicate the general types of adjustments commonly encountered in practice.

After posting the journal entries listed on page 173, the accounts affected would appear as illustrated on pages 174 and 175.

11. *Temporary adjustment accounts.*—Some of the accounts used in connection with adjustments are of a temporary character. The Salaries Accrued account, for example, is opened for the purpose of

JOURNAL ENTRIES FOR ADJUSTMENTS

	L. F.	Debit	Credit
February 28, 19—.			
(a)			
Merchandise	30	$ 2,000 00	
King & Company	72		$ 2,000 00
To record invoice of 2/28, received after close of month.			
(b)			
Cost of Goods Sold	53	40,692 79	
Merchandise	30		40,692 79
To transfer cost of merchandise sold in January and February to an expense account.			
(c)			
Office Salaries	43	43 33	
Salaries Accrued	54		43 33
To accrue two days' unpaid salaries for February.			
(d)			
Prepaid Advertising	55	50 00	
Advertising	44		50 00
To carry the cost of unused advertising material into a deferred asset account.			
(e)			
Prepaid Insurance	56	132 82	
Insurance	49		132 82
To carry the cost of unexpired insurance into a deferred asset account.			
(f)			
Accrued Interest on Notes Receivable	57	7 17	
Interest	51		7 17
For accrued interest to February 28.			
(g)			
Interest	51	15 63	
Interest Accrued on Notes Payable	58		15 63
For accrued interest to February 28.			

LEDGER ACCOUNTS AFFECTED BY ADJUSTMENTS

MERCHANDISE (30)

19—							19—					
Jan.	31	Total Jan.	√	$39,204	79		Feb.	28		J9	$40,692	79
Feb.	7		J8	5,360	00							
	28		J9	2,000	00							

OFFICE SALARIES (43)

19—												
Jan.	31	Total Jan.	√	$410	00							
Feb.	28	Total Feb.	√	510	00							
	28		J9	43	33							

ADVERTISING (44)

19—							19—					
Jan.	31	Total Jan.	√	$116	00		Feb.	28		J9	$50	00
Feb.	1		D21	224	00							
	17		D21	43	70							

INSURANCE (49)

19—							19—					
Jan.	4		J2	$159	38		Feb.	28		J9	$132	82

INTEREST (51)

19—							19—					
Feb.	13		J8	$11	66		Feb.	28		J9	$7	17
	28		J9	15	63							

COST OF GOODS SOLD (53)

19—												
Feb.	28		J9	$40,692	79							

SALARIES ACCRUED (54)

							19—					
							Feb.	28		J9	$43	33

PREPAID ADVERTISING (55)

19—												
Feb.	28		J9	$50	00							

PREPAID INSURANCE (56)

19—																	
Feb.	28					J9	$132	82									

ACCRUED INTEREST ON NOTES RECEIVABLE (57)

19—																	
Feb.	28					J9	$7	17									

INTEREST ACCRUED ON NOTES PAYABLE (58)

									19—								
									Feb.	28				J9	$15	63	

KING & COMPANY (72)

									19—								
									Feb.	28				J9	$2,000	00	

recording the liability for unpaid salaries which exists at the closing date of an accounting period. The next salary payment includes the amount which is carried in the Salaries Accrued account during the closing process.

In this illustration there were unpaid salaries amounting to $43.33 on February 28. On March 4, a payment of $130.00 for salaries for that week would be made. This would cover the accrual to February 28 and four days in March as well. In making the entries for the March 4 payment, it would be necessary to recognize the discharge of the accrued liability by debiting the temporary account opened for that purpose. The Salaries Accrued account, in other words, remains open only until the next pay day. The entry at that time would be as shown at the top of page 176.

Salaries Accrued		$43.33
Office Salaries		86.67
Cash		$130.00

There are certain short cuts often used in connection with temporary adjustment accounts of this type. The most common practice is to reverse all accrual entries immediately after the opening of the next accounting period. For example, the entry necessary to bring the salaries accrual into the expense of February was as follows:

Salaries Accrued	$43.33	
Office Salaries		$43.33

If the reversal of this entry is made under the date of March 1, after the statements have been prepared, it simplifies the recording of later payroll transactions. This entry would be as follows:

Salaries Accrued	$43.33	
Office Salaries		$43.33

The Salaries Accrued account would then be closed without a balance, but the Office Salaries account would have a credit balance of $43.33. On March 4, the next pay day, the following entry would be made:

Office Salaries	$130.00	
Cash		$130.00

The debit to Office Salaries, in this case, includes some of the expense for February, but this is eliminated automatically from the March expenses by the

credit that was made from the preceding journal entry.

The same method can be applied to the prepaid advertising balance and to the accrued interest items. Other short-cut methods will be explained in connection with the final steps in the closing process, which will be explained in the next chapter.

REVIEW

Explain what is meant by closing the books.

In what way does the working sheet for the adjusting entries aid in the closing process?

Show why it is necessary to make journal entries after the work sheet for adjusting entries has been prepared.

Give an illustration of a temporary adjustment account.

The Interest account in the illustration contains both income and expense elements. Is this a proper accounting procedure?

CHAPTER XI

CLOSING ENTRIES

1. *Purpose of closing entries.*—Since the balance sheet reflects the condition of a business, it is necessary to analyze every transaction with a view to determining its effect upon the balance sheet statement. The Income and Expense accounts are subdivisions of the Net Worth account and are kept for the purpose of explaining the causes for the changes in the proprietor's equity. It is necessary, therefore, to transfer the net balance of these accounts into the Net Worth account. When this process is completed, all accounts which have open balances will be listed on one side or the other of the balance sheet.

In the last chapter, we considered the adjustments necessary to make the balance in every account truly represent either a balance sheet item or an item of income or expense. The adjusted trial balance is a list of open account balances which may be classified into the two groups. All mixed elements have been eliminated and every balance may be placed in one or the other of the two principal statements, namely, the balance sheet and the statement of income and profit and loss.

The final step in the closing process consists in

transferring the Income and Expense account balances through the Profit and Loss account to the permanent Net Worth accounts.

2. *Methods of closing the accounts.*—The Income and Expense account balances are transferred to the Profit and Loss account by journal entries. These could be made directly from the adjusted trial balance, but inaccuracies that are difficult to locate are likely to result when this method is used. The best procedure is to prepare a working sheet as a basis for the journal entries. For the purpose of illustration, we may use the adjusted trial balance from the books of A. Roberts, as shown in Chapter X. The working sheet would appear as shown on page 180.

3. *Working sheet serves to sort the account balances.*—There are six money columns in this working sheet, two for the adjusted trial balance figures, two for the profit and loss items, and two for the balance sheet items. In preparing this statement, the accountant first lists the items as shown in the "Adjusted Trial Balance" columns. He then enters each item under the proper column heading in one of the last four columns. The first account, A. Roberts—Net Worth, is clearly a balance sheet item and should be placed in the last column. The second item, A. Roberts—Drawing Account, is also a net worth account, being in the nature of an offset to the first account. This will eventually be deducted from the Net Worth account, but, for the purposes of the work sheet, will be listed in the asset column. Since the

WORKING SHEET FOR CLOSING ENTRIES

L. F.	Accounts	Adjusted Trial Balance		Profit and Loss		Balance Sheet	
		Debits	Credits	Expenses	Income	Assets	Liabilities
1	A. Roberts—Net Worth		$10,000 00				$10,000 00
1	A. Roberts—Drawing Account	$ 900 00				$ 900 00	
2	Cash	14,665 23				14,665 23	
5	Furniture & Fixtures	500 00				500 00	
25	Notes Receivable	2,280 00				2,280 00	
30	Merchandise	5,872 00				5,872 00	
31	Notes Payable		16,484 79				16,484 79
32	Discount on Notes	33 87		$ 33 87			
35	Sales		46,014 26		$46,014 26		
39	Discount on Sales	293 19		293 19			
40	Discount on Purchases		624 00		624 00		
43	Office Salaries	963 33		963 33			
44	Advertising	333 70		333 70			
45	General Expense	119 14		119 14			
46	Freight Expense	146 44		146 44			
47	Printing	42 60		42 60			
48	Rent	600 00		600 00			
49	Insurance	26 56		26 56			
50	Commissions	741 15		741 15			
51	Interest	20 12		20 12			
52	Loss on Uncollectible Accounts	381 40		381 40			
61	B. Eckert & Sons	1,950 00				1,950 00	
65	M. Phillips	2,902 50				2,902 50	
71	F. Peters & Bro.	1,060 00				1,060 00	
77	Peabody & Longman	468 00				468 00	
72	King & Company		2,000 00				2,000 00
53	Cost of Goods Sold	40,692 79		40,692 79			
54	Salaries Accrued		43 33				43 33
55	Prepaid Advertising	50 00				50 00	
56	Prepaid Insurance	132 82				132 82	
57	Accrued Interest on Notes Receivable	7 17				7 17	
58	Interest Accrued on Notes Payable		15 63				15 63
	Totals	$75,182 01	$75,182 01	$44,394 29	$46,638 26	$30,787 72	$28,543 75
	Net Profit			2,243 97			2,243 97
				$46,638 26	$46,638 26	$30,787 72	$30,787 72

net worth balance is overstated by the amount of the withdrawals of the proprietor, it is proper to list this balance on the opposing side of the balance sheet.

All of the remaining accounts in the adjusted trial balance are readily classified under the four headings. There may be some question as to the propriety of listing Discount on Purchases as an income and Discount on Sales as an expense. The former is an offset to the Cost of Goods Sold, which is listed as an expense, and the latter is an offset to Sales, which is an income item. In the closing process, it is convenient to enter offsetting items on the opposite side of the statement in which the main account appears.

The preparation of a working sheet is in reality a sorting process. The list of accounts, as it appears in the adjusted trial balance, is merely sorted into the groups in which the accounts belong. Each one of the columns may be looked upon as a pigeonhole into which the appropriate account balances are placed.

4. *Journalizing the closing entries.*—The columns in the working sheet headed "Expenses" and "Income" contain all of the information necessary to prepare the closing entries. All of the items in the expense column must be credited to the accounts indicated and debited to the Profit and Loss account. Those items in the income column should be debited to the accounts indicated and credited to the Profit and Loss account. Two journal entries are sufficient to transfer these account balances, as on page 182.

(a)

Profit and Loss	$44,394.29	
Discount on Notes		$ 33.87
Discount on Sales		293.19
Office Salaries		963.33
Advertising		333.70
General Expense		119.14
Freight Expense		146.44
Printing		42.60
Rent		600.00
Insurance		26.56
Commission		741.15
Interest		20.12
Loss on Uncollectible Accounts		381.40
Cost of Goods Sold		40,692.79

To close the sundry expense accounts into the profit and loss account.

(b)

Sales	$46,014.26	
Discount on Purchases	624.00	
Profit and Loss		$46,638.26

To close the sundry income accounts into the profit and loss account.

After these journal entries are posted, the debits and credits in the several expense and income accounts will be equal, but the Profit and Loss account will have a credit balance of $2,243.97. This amount should be transferred to the proprietor's account by the entry at the top of page 183.

Profit and Loss $2,243.97
A. Roberts—Net Worth $2,243.97
To transfer the net profit for the period to the proprietor's account.

One further journal entry must be made to complete the closing entries. The proprietor's Drawing account should be closed into his Net Worth account by the following entry:

A. Roberts—Net Worth $900.00
A. Roberts—Drawing account $900.00
To close A. Roberts' Drawing account.

5. *Account balances after closing entries.*—After all of the closing entries have been posted, the only accounts that still have debit or credit balances are those which appear on a balance sheet statement. The balances in these accounts correspond in amount to the items in the last two columns of the working sheet. In fact, the balance sheet columns of a working sheet are in the nature of a trial balance of the accounts after closing.

It is customary to rule up all of the ledger accounts, after the closing entries have been posted, so as to show clearly the opening balances for the next accounting period. This process serves to set off the entries made in each accounting period from those of earlier and later periods.

6. *Ruling the accounts.*—The conventional method of ruling accounts at the end of an accounting period

may be shown in the accounts of A. Roberts. These show the condition of the accounts after all of the adjusting and closing entries have been made. The balance of an account is written first on the side of the account that has the smaller total. The balance in A. Roberts—Net Worth account, for example, is $11,343.97. This amount is written on the debit side because that is the smaller. The word "Balance" is written in the explanation column to call attention to the fact that this is not an entry posted from a book of original entry.

After the balance has been entered on the smaller side, the two money columns are equal in amount. The totals of the debit and credit columns are placed opposite each other on the same line and then a double rule is drawn just below the figures. Another double rule is drawn across the date and folio columns, as shown in A. Roberts—New Worth account, on page 186.

Finally, the balance figure is entered below the double lines on the opposite side of the account from which it was previously placed, and under the opening date of the new accounting period. Under date of March 1, the credit balance in A. Roberts—Net Worth account is shown as $11,343.97. This is the amount of his proprietorship after the close of business on February 28, and it is the amount with which he starts business on March 1. At the end of the next accounting period, the same process will be repeated.

7. *Illustrations of accounts closed.*—The accounts shown on page 186 are taken from the ledger of A. Roberts. Only a few of the accounts are given in the illustration, to show the method of ruling. Every account in the ledger is ruled in this manner, except when there is only one debit entry and one credit entry of an equal amount. When this occurs, it is not necessary to repeat a total, and the double ruling is made directly below the entries shown.

It is suggested that the reader take a piece of ledger paper and go through the process of closing the other accounts in this exercise. This will serve to clear up any questions that might arise in connection with the technique of closing the accounts.

8. *Why the accounts are ruled.*—Ruling the accounts is a routine process that apparently has no significance from the standpoint of accounting analysis. Although there are no changes made in the account balances in this process, there are certain definite advantages. The double lines set off a definite checking up period. They may be likened to boundary lines, with everything between two sets of double rulings pertaining to a particular period.

In looking over the books of a concern, the accountant can visualize the operations as they affect certain elements by concentrating his attention upon the space between two sets of rulings. The Merchandise account, in the illustration on page 186, for example, shows, in condensed form, the results of all transactions affecting merchandise during the first

ILLUSTRATION OF LEDGER ACCOUNT RULINGS

A. ROBERTS—NET WORTH (1)

19—						19—					
Feb.	28	Drawings	J10	$900	00	Jan.	2		J1	$10,000	00
		Balance		11,343	97	Feb.	28	P. & L.	J10	2,243	97
				$12,243	97					$12,243	97
						Mar	1	Balance		$11,343	97

CASH (2)

19—						19—					
Jan	31	Total	√	$27,134	94	Jan	31	Total Jan.	√	$21,262	44
Feb	28		R20	23,490	30	Feb	28		D21	14,697	57
								Balance		14,665	23
				$50,625	24					$50,625	24
Mar	1	Balance		$14,665	23						

MERCHANDISE (30)

19—											
Jan	31	Total Jan.	√	$39,204	79	Feb	28		J9	$40,692	79
Feb	7		J8	5,360	00			Balance		5,872	00
	28		J9	2,000	00						
				$46,564	79					$46,564	79
Mar	1	Balance		$5,872	00						

SALES (35)

19—						19—					
Feb	28	P. & L.	J10	$46,014	26	Jan	31	Total Jan.	√	$25,688	90
						Feb	28		S15	20,325	36
				$46,014	26					$46,014	26

PROFIT AND LOSS (59)

19—						19—					
Feb	28		J10	$44,394	29	Feb	28		J10	$46,638	26
	28		J10	2,243	97						
				$46,638	26					$46,638	26

two months of the year, above the two sets of totals.

It will be noted, also, that the balances carried forward are equal in amount to the item in the balance sheet column of the work sheet. It is convenient to have the balance set out prominently to facilitate checking for errors in posting in subsequent periods.

In some of the modern systems of accounting records, this detailed ruling process is eliminated by the use of other devices. These will be described in a later chapter. In all cases, however, some provision is made by which the entries pertaining to different accounting periods are clearly differentiated in the accounts. The method of ruling illustrated on page 186 is the conventional way of accomplishing that result.

9. *Frequency of closing.*—The normal accounting period for closing the books is one year. In the illustration given above, a period of two months was taken, because the transactions in the exercises in Chapters V and VI covered that period. The process would be the same, no matter how long a period might be involved. Some concerns close their books semi-annually, others every three months, and some complete the process each month. The length of the period to be used depends upon the uses to which the accounts will be put and the nature of the enterprise involved.

The year is taken as the most significant unit of time for comparative purposes and is used in most cases as the accounting period. Income taxes are

assessed upon annual incomes, and securities are sometimes issued, giving certain rights to net income as computed for the year. Furthermore, all conditions affecting income as a result of seasonal changes are taken into consideration in an annual statement of income. Computation of profits for shorter periods of time, on the other hand, are likely to be seriously affected by the varying conditions of demand in different seasons of the year.

10. *Summary of the closing process.*—Practicing accountants find it convenient to shorten the work of closing the accounts by combining some of the steps described in this chapter and Chapter X. They complete all of the fundamental steps, but take certain short cuts in order to complete the work more quickly. It is not our purpose to discuss detailed accounting practices, hence, these will not be described at length. Any person interested in accounting as a part of a general training in business management, however, should have some notion as to the ways in which an accountant simplifies his work.

There are eight distinct steps in the process of closing the accounts after the trial balance has been taken. They are as follows:

(a) Each account balance in the trial balance is analyzed to determine what adjustments are necessary to bring them into conformity with the facts.

(b) A working sheet for adjusting entries is prepared. This includes a trial balance, adjusting entries, and an adjusted trial balance.

(c) Adjusting entries are journalized.
(d) Adjusting entries are posted.
(e) A working sheet for closing entries is prepared, in which the balance sheet items are separated from those showing income and expense.
(f) Closing entries are journalized.
(g) Closing entries are posted.
(h) Ledger accounts are ruled and balances are carried forward to the next accounting period.

11. *Accounts are used for financial statements.*— We have now completed a description of the accounting processes. These have covered all of the operations necessary to bring into the book records the data necessary to prepare the statements used in the control of a business enterprise.

In the first place, a set of books is opened when the original investment is made. Following this, all business transactions are classified and recorded in books of original entry, such as journals, sales books, cash books, etc. Next, the books of original entry are posted to the ledger accounts as indicated in the entries. Then a trial balance is prepared for the purpose of testing the accuracy of the work. Finally, the accounts are adjusted and closed as described in this chapter.

After the books are closed, the accounts are in condition to receive the entries resulting from transactions of the next accounting period and the same series of operations is carried through. This completes a cycle of operations that is repeated in each accounting period. The reader should be able, at

this time, to visualize these steps or stages in the technique of keeping a formal set of accounting records.

The accounts are maintained for the purpose of obtaining information that can be used for management purposes. This phase of accounting involves the preparation of statements that are readily interpreted. The profit and loss statement and balance sheet should be presented in such a manner as to convey as much information as possible. The methods of preparing these statements will be discussed in Chapters XII and XIII.

REVIEW

State the function of a working sheet for closing entries.

Is the proprietor's Drawing account an asset? Why is it placed in the asset column?

State the significance of the rulings in the accounts after the closing entries have been recorded.

Summarize the steps in the closing process.

CHAPTER XII

THE PROFIT AND LOSS STATEMENT

1. *The account form of statement.*—All of the information required for a profit and loss statement is contained in the Profit and Loss account. One method of preparing the statement is to make a transcript of the account. A statement prepared in this way looks just like an account, except that an explanation is given for each amount. The details of each entry in the account are listed in the statement form. A profit and loss statement, in account form, taken from the accounts of A. Roberts, after the closing entries shown in the preceding chapter, would appear as illustrated on page 192.

This statement presents the information concerning the income of the enterprise on one side and the expenses incurred in producing that income on the other. It shows all of the items that were included in computing net profit. There were only a few accounts used in this illustration, and the statement as presented would probably be adequate for practical purposes. In a larger enterprise, however, there would be a number of income items and a great many more expense accounts. It would be difficult, in that

A. ROBERTS
PROFIT AND LOSS STATEMENT
For the Period Ended February 28, 19—

Expenses		*Income*	
Cost of Goods Sold	$40,692.79	Sales	$46,014.26
Discount on Sales	293.19	Discount on Purchases	624.00
Rent	600.00		
Office Salaries	963.33		
Commissions	741.15		
Advertising	333.70		
Freight Expense	146.44		
Insurance	26.56		
General Expense	119.14		
Printing	42.60		
Discount on Notes	33.87		
Interest	20.12		
Loss on Uncollectible Accounts	381.40		
Net Profit	2,243.97		
Total	$46,638.26	Total	$46,638.26

case, to make all of the comparisons that might be desired.

2. *Subdividing the profit and loss statement.*—A manager usually wishes to have the statement of profit and loss presented in sections which will enable him to make comparisons of costs and incomes from different divisions of the business. In a trading enterprise, such as that of A. Roberts, it is desirable to have information concerning the trading profit, the profit from operations, and the final net profit presented in separate figures. This may be accomplished by subdividing the profit and loss statement in the manner shown on page 193.

3. *Analysis of the subdivided statement.*—This statement shows four different profit items, each one carried forward to the next section of the statement.

A. ROBERTS
PROFIT AND LOSS STATEMENT
For the Period Ended February 28, 19—

	Trading		
Cost of Goods Sold	$40,692.79	Sales	$46,014.26
Trading Profit	5,321.47		
	$46,014.26		$46,014.26
	Selling and Administrative		
Office Salaries	$ 963.33	Trading Profit	$5,321.47
Commissions	741.15		
Advertising	333.70		
Freight Expense	146.44		
General Expense	119.14		
Printing	42.60		
Profit from Operations	2,975.11		
	$5,321.47		$5,321.47
	Financial		
Rent	$ 600.00	Profit from Operations	$2,975.11
Insurance	26.56	Discount on Purchases	624.00
Discount on Sales	293.19		
Discount on Notes	33.87		
Interest	20.12		
Net Profit	2,625.37		
	$3,599.11		$3,599.11
	Other Losses and Gains		
Loss on Uncollectible Accounts	$ 381.40	Net Profit	$2,625.37
Net Profit available for Distribution	2,243.97		
	$2,625.37		$2,625.37

The first one, trading profit, is the excess of the sales over the cost of goods sold. This is sometimes called gross profit or gross margin. The second is called operating profit. This is obtained by deducting the selling and administrative expenses from the trading profit. In the next section, the interest costs, rent,

insurance, and other financial costs are considered, leaving a net profit after all financial adjustments have been made. In the final section, provision is made for exceptional incomes and losses. The only item recorded in the illustration was the loss resulting from the failure of Foster Brothers on February 6. This was considered as an unusual loss, not a normal cost of operating the business.

Some questions may be raised as to the propriety of considering a loss from uncollectible accounts as a deduction from net profits. In those lines of business that are conducted on the credit basis, a certain amount of loss is expected from this source. It is proper, in such cases, to charge the losses from bad debts to the operating costs as a normal financial expense. For the purposes of this illustration, however, it was considered that losses of this sort are not a normal cost of doing business and, therefore, should be handled as shown in the statement. Other deductions of this type would be loss from fire, not covered by insurance or other causes, of goods, machinery, or buildings.

The final net profit carried to the proprietor's account is the same as that shown in the statement on page 192. It is possible to make comparisons from the subdivided statement, however, that were not evident in the former one.

4. *Subdivisions of the trading section.*—In the illustration above, all of the sales were lumped into one sum and the trading profit was computed for

the business as a whole. It would be a simple matter to determine gross profit by classes of merchandise, if separate sales and merchandise accounts were maintained for each line of goods handled. Thus, it might be desirable to know the trading profit from sales of Axminster, Brussels, Linoleum, etc., as well as the trading profit from all sales. The trading section of the profit and loss statement, in that case, would be divided into as many parts as there were special sales accounts. This would make the statement considerably longer, but it would not involve any different technique.

5. *Manufacturing section of the statement.*—In order to determine the cost of goods sold for a manufacturing enterprise, it is necessary to close all factory expense accounts into a manufacturing account. An additional section of the profit and loss statement is prepared to show the cost of manufacturing. This includes the material, labor, and expense items incurred in the factory. The manufacturing section of the subdivided profit and loss statement is illustrated on page 196. This section would appear first in the statement, and the manufacturing cost is transferred to the trading section. The cost of goods manufactured is a charge to an account entitled "Finished Goods," which account is treated in the same way as the Merchandise account in a trading concern. After the cost of goods sold is calculated, the profit and loss statement from that point on is the same as any other.

MANUFACTURING

Materials Used	$.....	Manufacturing Cost, carried to Trading Section	$.....
Direct Labor	.....		
Freight Inward	.....		
Indirect Expense:			
Fuel and Power	.....		
Factory Supplies	.....		
Machinery Repairs	.....		
Depreciation—Machinery	.....		
Factory Overhead	.....		
	$.....		$.....

6. *Simplified form of profit and loss statement.*— The illustrations of statements given thus far in this chapter have been made in the form of accounts. In each case, it has been assumed that the statement is copied directly from the ledger account, with some descriptive material added. This form of statement is adequate for the purposes of a person who is familiar with accounting technique. It is difficult, however, for one who does not understand the principles of debit and credit to read a statement in this form readily. There is no particular reason for adhering to the account form in reporting the information contained in the book records. It is much better to rearrange the data in such a way as to make it understandable to one who is not acquainted with accounting methods.

It would be possible to write in narrative form a rather complete history of the business from the Profit and Loss account. If this were done, the statement would constitute a formal report. This would

be carrying the process of classification farther than necessary for practical purposes. What is needed is a report that is more simple than the account form, yet one which is not as detailed as a narrative.

7. *Report form of profit and loss statement.*—As an illustration of the report form of statement, we may rearrange the items in the profit and loss statement for A. Roberts that was given above. All of the information which was contained in that statement is presented in the form illustrated on page 198, in an arrangement that is more readily understood.

8. *Analysis of the report form of statement.*—This type of statement usually starts with the gross sales figure because it is considered the most important information, since it shows the volume of business conducted during the period. In the illustration, however, the gross sales and the net sales are the same, hence the caption "Net Sales." To arrive at net sales, there would be deducted from the gross sales figure such items as returned sales, allowances on sales, and special *trade* discounts on sales. The discounts on sales allowed by A. Roberts are *cash* discounts, which constitute a financial expense and are handled elsewhere in the statement.

The cost of goods sold is obtained, in this case, by subtracting the inventory on hand at the end of the period from the purchases made during the period. Had this business been operated for a period prior to the one under consideration, the cost of goods

A. ROBERTS

PROFIT AND LOSS STATEMENT

For the Period Ended February 28, 19—

Net Sales		$46,014.26
Cost of Goods Sold:		
Purchases	$46,564.79	
Less Inventory February 28, 19—.	5,872.00	
Total Cost of Goods Sold		40,692.79
Gross Profit on Sales		$5,321.47
Selling and Administrative Expense:		
Office Salaries	$963.33	
Commissions	741.15	
Advertising	333.70	
Freight Expense	146.44	
General Expense	119.14	
Printing	42.60	
Total Selling and Administrative Expense		2,346.36
Profit from Operations		$2,975.11
Other Income:		
Discount on Purchases		624.00
Total		$3,599.11
Other Expenses:		
Rent	$600.00	
Insurance	26.56	
Discount on Sales	293.19	
Discount on Notes	33.87	
Interest	20.12	
Total Other Expenses		973.74
Profit and Loss for the Period		$2,625.37
Special Loss:		
Loss on Uncollectible Accounts		381.40
Net Profit Available for Distribution		$2,243.97

sold would have been arrived at by adding the previous inventory to the current purchases and subtracting the current inventory. Another amount that must be taken into consideration in arriving at

the cost of goods sold is the inward freight expense. Here it is apparent that those selling merchandise to Mr. Roberts paid all freight charges. By subtracting the cost of goods sold from net sales, we arrive at the gross profit on sales.

The selling and administrative expenses appear next on the statement. These expenses are itemized and the total is deducted from the gross profit, giving the profit from operations.

It will be noted that, in the illustration, the selling and administrative expenses have been grouped into one total. While this is often done in the case of a small business where the items are few, it is a good practice to separate these two classes of items in order to determine selling costs. This is especially true in a large business.

The next two sections of the profit and loss statement have to do with income and expenses that are derived and incurred outside of the ordinary operations of manufacturing or purchasing and disposing of merchandise. Such items are usually referred to as financial items. For example, under "Other Income," we find listed the amount received from discounting purchase invoices. To some it might seem that such discount could properly be credited to purchases and thus reduce the cost of goods sold. But, on the other hand, if sufficient funds were not on hand with which to take the offered discount, this advantage could not be obtained.

Under "Other Expenses," there are listed certain

items which are incurred outside of the ordinary transactions of acquiring and disposing of merchandise, and which are properly referred to as financial expense items. There might be some discussion as to the propriety of handling "Rent" in this classification instead of as a selling or administrative expense. When it is possible to allocate the rent charge to the selling and administrative departments, it is good practice to do so, but not otherwise.

As to the other items classified in this section, it is clear that discount on notes and interest on borrowed money are financial expenses. The same may be truly said of insurance and discounts on sales, because insurance premiums are paid merely for the protection of certain capital invested in the business, and cash discounts are allowed on sales to obtain a quicker return of capital invested in goods. Subtracting the financial expenses from the total income, we arrive at the profit or loss for the period under consideration.

There is one other item on the profit and loss statement that has not been mentioned. The loss incurred by the failure of one of Mr. Roberts' customers is given special handling in the statement, and it is deducted to arrive at the net profit available for distribution to the proprietor. The section of the statement in which this item is contained is reserved for extraordinary charges not applicable to the operations of the period. As opposed to this section, there often appears in the statement another section in

which is shown the extraordinary gains of the period.

9. *Advantages of the report form.*—The report form of statement has the distinct advantage, over the account form, of being much clearer. A person can start at the top and read straight through without requiring any outside explanations of terms. It constitutes a complete historical record of the business operations, arranged in logical sequence. It is possible to see at a glance just how the income from sales has been used.

Out of a total of net sales, amounting to $46,014.26, the concern spent $40,692.79 for merchandise; it incurred various selling and administrative expenses to the extent of $2,346.36; it received an income of $624.00 from discounting invoices; it paid $973.74 for certain financial expenses, and lost $381.40 on a bad account, leaving a net profit of $2,243.97. These items are set forth in such a way as to attract the attention of the reader.

Another advantage of equal significance is the ease with which comparisons can be made. A manager judges the progress he is making by comparing the current operations with those of preceding periods. When the statement is prepared in this form, he can place a whole series of statements before him and sight across the page for comparison of like items over a considerable period of time.

Most business concerns today operate on the budget plan. This means that an estimated statement of profit and loss is prepared at the beginning

of each accounting period. The manager anxiously awaits the statements from the accountants at the end of the period to see how close the actual figures compare with the budget figures. This form of statement enables him to make this comparison readily and to locate quickly the particular items that are out of line.

10. *Condensed statements.*—The profit and loss statement is prepared primarily for the purpose of the manager, but it is also used by investors, bankers, creditors, and other interested persons. In a large concern, the number of accounts used for purposes of the management is much larger than is required for general reports for other persons. It is desirable, in such cases, to prepare additional condensed statements in which the details are eliminated.

It is possible to summarize the details in any section of the profit and loss statement to meet the needs of any occasion. In the published reports of corporations, only a few items are given to show, in general, the results of operations. Some concerns object to giving out details of income and expenses on the ground that they are liable to fall into the hands of competitors and thus give them an undue advantage. For this reason, they will present an abridged statement showing only the items that they feel will be of use and yet will not divulge any confidential information.

It is possible for one concern to have several profit and loss statements prepared for different purposes.

These statements do not contain conflicting information. Some of them are more detailed than others, but the final statement of net profit is the same in all.

11. *Universal application of statement forms.*— The statements given in the illustrations in this Text cover the operations of a very simple trading concern, but the forms used are of wide application. A concern that sells $100,000,000 worth of goods would use the same form of statement as one whose sales amount to only a few thousand dollars. Furthermore, it makes no difference whether the enterprise sells rugs or locomotives, the arrangement of profit and loss accounts is the same.

There are apparent exceptions in the case of certain types of business, such as banks, railroads, and public utilities. These, however, involve differences in titles of accounts rather than in form of statement. Instead of sales of commodities, their business consists in sales of services. Their income accounts bear different titles such as interest, exchange, and revenue, instead of sales. Furthermore, they do not have occasion to use a "Cost of Goods Sold" account, but their expense accounts cover the cost of producing the services sold. We shall have occasion, later on, to discuss the accounting statements of concerns of this type, and it will be seen that they are similar in form to the ones that have been descibed in this chapter.

Some trade associations have adopted uniform systems of records to enable their members to compare their statements and to set up standard cost

figures. The titles of the accounts differ in the several lines of business, but the forms are much the same. It is possible for a person who understands the form of reporting profit and loss in one business to read intelligently the reports of any other business.

REVIEW

Give the sources of the information necessary for the preparation of the two principal accounting statements.

Describe the sections of the profit and loss statement of a trading enterprise. What significant information may be obtained for each section?

Name an additional section that is desirable for a manufacturing concern.

State the advantage of the report form of statement over the account form.

Show how the profit and loss statements may be condensed for the use of bankers and investors.

CHAPTER XIII

THE BALANCE SHEET

1. *Purpose of the balance sheet.*—The balance sheet is the most important statement prepared from the accounting records. Its purpose is to show the financial condition of an enterprise on a stated date. There is a continuous flow of transactions affecting the financial status of every going concern. These are so varied in their nature, and affect the resources of the business in so many different ways, that it is necessary to check up on the attained results at certain intervals of time.

It is not necessary to stop the operations of the enterprise for this purpose, but it is essential to analyze the results of transactions, both completed and incompleted, up to a certain date, just the same as though the business had stopped momentarily. The balance sheet represents, in fact, a cross-section view of the concern's financial affairs, while the profit and loss statement gives a history of its operations for a period of time.

If the accountant has analyzed every account carefully and has made the adjusting entries necessary to bring them into accord with the facts, the balance sheet statement will portray the condition of a con-

cern accurately. It is not always possible, however, to be sure that every adjustment has been made. Furthermore, there are items for which estimates of values must be made. The amount to be charged for depreciation on buildings and machinery, for example, is based on estimates that may prove later to be incorrect. This means that the balance sheet may not show the *exact* financial condition, but it does represent the facts as accurately as it is possible to determine them.

It is important, in interpreting balance sheet statements, to recognize these limitations. We shall have occasion, later on, to examine some of the problems confronting the accountant in his efforts to obtain the information needed to prepare an accurate representation of the financial condition of a firm.

2. *Account form of balance sheet.*—The balances carried forward after the accounts are closed are all balance sheet items. A list of the debit and credit balances, therefore, constitutes a balance sheet. The balance sheet of A. Roberts, prepared from his books after all of the closing entries had been made, as described in the preceding chapter, would be as shown on page 207. This balance sheet is prepared directly from the open account balances and is arranged in account form, with the assets on the left and the liabilities and net worth on the right.

3. *Balance sheet items classified.*—The statement shown on page 207 gives all the facts that can be obtained from the accounts after the books have been

A. ROBERTS
BALANCE SHEET
February 28, 19—

Assets		*Liabilities*	
Cash	$14,665.23	Notes Payable	$16,484.79
Notes Receivable	2,280.00	King & Company	2,000.00
M. Phillips	2,902.50	Interest Accrued on Notes Payable	15.63
F. Peters & Bro.	1,060.00	Salaries Accrued	43.33
Peabody & Longman	468.00	A. Roberts—Net Worth	11,343.97
B. Eckert & Sons	1,950.00		
Merchandise	5,872.00		
Furniture & Fixtures	500.00		
Prepaid Insurance	132.82		
Prepaid Advertising	50.00		
Accrued Interest on Notes Receivable	7.17		
Total	$29,887.72	Total	$29,887.72

closed. On the one side are listed all of the asset items in the possession of the concern, while on the other side there is a list of the claims or equities in the assets, including the proprietor's net worth. The totals are equal, as they naturally must be. It is possible to gain a general impression of the financial status of the concern and the types of property in which its resources have been invested. It is difficult, however, to make certain significant comparisons. These can be made more easily by listing the items in groups showing subtotals, as shown in the statement on page 209. This form of statement sets forth the items in such a way that comparisons may be made readily.

4. *Current assets and liabilities.*—The current assets are listed in the first section of the balance sheet. These include cash and the items which, in the normal operations of the business, will be converted into cash in a fairly short period. The merchandise consists of goods on hand, ready for sale. Notes receivable and accrued interest will be collected within sixty days and the accounts receivable are the open book accounts with customers, grouped into one account for statement purposes.

On the other side are the liabilities which will mature and which must be paid within a short time. These include notes payable, creditors' open accounts that must be paid within thirty days, and salaries and interest accrued on notes payable.

A comparison of the current assets with the cur-

A. ROBERTS
BALANCE SHEET
February 28, 19—

Assets			*Liabilities*		
Current Assets:			*Current Liabilities:*		
Cash	$14,665.23		Notes Payable	$16,484.79	
Notes Receivable	2,280.00		Accounts Payable	2,000.00	
Accounts Receivable	6,380.50		Salaries Accrued	43.33	
Merchandise	5,872.00		Interest Accrued on Notes Payable	15.63	
Accrued Interest on Notes Receivable	7.17		Total Liabilities		$18,543.75
Total Current Assets		$29,204.90	*Capital Account:*		
Furniture & Fixtures		500.00	A. Roberts—Net Worth		11,343.97
Deferred Charges to Operation:					
Prepaid Insurance	$132.82				
Prepaid Advertising	50.00				
Total Deferred Charges		182.82			
Total Assets		$29,887.72	Total Liabilities and Capital		$29,887.72

rent liabilities indicates the condition of immediate solvency. Obviously, the debts that must be paid at an early date will be met from the proceeds of the assets which will be converted into cash in the same period. It is essential for a concern to maintain a considerable excess of current assets over current liabilities. In this case, it would appear that the excess of $10,661.15 is adequate, particularly in view of the large cash balance. This is not necessarily true, however. Bankers have considered anything less than a ratio of two to one of current assets to current liabilities as somewhat unsafe for a trading concern. If this ratio were insisted upon in this case, the current assets should total more than $37,000.00, or the liabilities should be reduced by $4,000.00.

Whenever the current liabilities approach the current assets in amount, it is a danger signal, and should be corrected as soon as possible. One way to improve the condition is for the proprietor to invest more funds himself and thus reduce the outstanding liabilities. Another method is to borrow funds on long-term notes, having due dates several years in advance. The comparison of current assets and current liabilities is watched very closely by bankers and creditors.

5. *Fixed assets and liabilities.*—The distinction between fixed and current assets is made on an arbitrary basis. There is no question but that a building which will last for twenty years or more is a fixed asset. But a question might arise as to some forms

of equipment or tools that are consumed within shorter periods of time. The usual practice is to consider any item that will not be realized upon or consumed within the period of one year as a fixed asset. Likewise, liabilities which will not come due within a year are called fixed liabilities.

In this illustration, there is only one fixed asset—furniture and fixtures—amounting to $500.00, and there are no fixed liabilities. This condition, taken by itself, is favorable. The fact that the current ratio is low, however, would lead one to question the financial policy of the concern. If current indebtedness is incurred for the purchase of fixed asset items, the financial stability of a business is seriously affected.

It is to be noted that in the illustration used, current assets are shown ahead of fixed assets on the balance sheet. Another popular arrangement of these classes of assets is to show the fixed assets first. There are tenable arguments in favor of each method. Of course, the creditor is interested in the first arrangement because the assets which can be most readily turned into cash are placed at the head of the list. On the other hand, in many cases, the fixed assets form the greater part of the total assets and, for that reason, present the concern's condition in a more favorable light if placed at the head. In any case, the order adopted should be applied to both sides of the balance sheet.

6. *Deferred and accrued items.*—The deferred

and accrued items on either side of the balance sheet are usually of minor significance. The nature of these items was described in Chapter IX. They arise in connection with the adjustments that are made in the closing operations.

Although they are usually small in amount, deferred items should be examined closely in an analysis of a balance sheet. Sometimes a concern will use this classification to cover up losses that it desires to carry over to later periods. A large item in the deferred assets should be scrutinized carefully to ascertain whether it should be deferred to a subsequent period or absorbed in the current period.

7. *Capital items.*—The net worth accounts are listed under the head of capital items. In this case, there is only one account, that of A. Roberts—Net Worth. In a partnership, the proprietorship accounts of the several partners would be included in this classification. A corporation balance sheet would have accounts for capital stock, surplus, and reserves representing the equity of the proprietors. Reserve accounts, to be discussed later, might also appear on the individual proprietor and partnership balance sheet statement.

8. *Analysis of balance sheet statements.*—The comments made above concerning the balance sheet of A. Roberts are illustrative of the points to be considered in the analysis of any balance sheet. There are certain things that a person looks for in determining what his actions will be with reference to trans-

actions with a concern. A banker usually looks first to the ratio of current assets to current liabilities and then to the other items in the statement.

An investor in the stocks or bonds of a corporation, on the other hand, is particularly interested in the amount of capital in relation to the total resources. He is also interested in the amount of capital tied up in the different types of assets. Furthermore, he may wish to have some information as to the basis for the valuation of the assets, so that he can judge for himself as to the reasonableness of the statement.

A statement cannot be read intelligently by one who is not familiar with business terms. It is necessary to have some notion as to the general nature of the business under consideration. One balance sheet of a business enterprise, taken by itself, would not convey a great deal of information, if a person did not have something with which to compare it. In other words, comparisons can be made only on the basis of standards, and these are established in the mind of the reader by constantly analyzing the statements of a large number of concerns. A person finally acquires a certain sensitiveness to accounting statements, so that he reacts immediately to any unusual conditions represented in reports.

9. *Illustration of a published balance sheet.*—Most of the large corporations publish their balance sheet statements for the information of their stockholders and the investing public. There is no generally accepted form for reporting purposes, and, as a result,

the published statements are presented in a great many different arrangements. Some of them follow the account groupings shown in the illustration on page 209. Others place the fixed assets and fixed liabilities first and the current assets and current liabilities second. Still others make no attempt at significant groupings, but merely list the account titles as was done in the illustration on page 207. In some balance sheets, the account titles are given in very abbreviated form, whereas in others each item is carefully explained, with supplementary descriptive material.

The statement of the Borden Company, shown on pages 216 and 217, as it was published in the *Commercial and Financial Chronicle,* is an illustration of a balance sheet that conveys the essential information in a well-organized form.

In this balance sheet, the fixed assets are placed first and a note explains the basis upon which the valuations were made. The accrued depreciation is deducted from the book values. This enables the reader to see readily the amounts of both the gross and net values of the plant and equipment. The net value of the property is $101,732,210.79, while the fixed liabilities, as shown on the other side of the statement, amount to only $611,157.00. The company has evidently adopted a policy of providing funds for its fixed property requirements from the proceeds of capital stock rather than from bond issues.

The current assets total $64,197,210.20 as com-

pared with current liabilities of $28,932,107.72. The ratio is considerably more than two to one and is an evidence of a sound current financial condition.

The deferred debits and credits are both rather small in proportion to the total assets and liabilities. These consist of miscellaneous accruals and prepayments of the types considered in Chapter IX.

The final item on the asset side is entitled, "Trademarks, Patents, and Goodwill." This is an intangible asset representing the value of the various rights, privileges, and advantages that enable this concern to obtain a rate of income higher than the average. Although this item is fairly large in amount, it apparently has been conservatively valued. This is evident from the fact that it has been possible for the company to accumulate a surplus amounting to more than one-third of the capital stock.

Net worth is represented by the last three items on the liability side, namely, capital stock, reserves, and surplus. These items amount to $144,076,977.05, out of a total investment, in all assets owned by the company, of $174,046,336.96. This represents a very favorable condition from the standpoint of bankers, creditors, and the stockholders.

This statement illustrates the typical corporation balance sheet. It was made up from accounting records which involve all of the fundamental processes described in the earlier chapters of this text. A concern of this size undoubtedly has installed a number of labor-saving devices in its office to simply the book-

THE BORDEN COMPANY AND ALL SUBSIDIARY COMPANIES

CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1929

Assets

Property, Plant, and Equipment:		
Including Madison Avenue and Hudson Street Office Building Properties (Values are based on cost or on field surveys by Company's engineers, supplemented where necessary by independent appraisals, with subsequent additions at cost)		$149,145,922.11
Less		
Mortgages—Madison Ave. Office Building properties	$ 1,400,000.00	
Reserves for Depreciation	46,013,711.32	
		47,413,711.32
Net Property, Plant, & Equipment		$101,732,210.79
Current assets:		
Cash	$ 8,750,764.31	
Receivables—Less Reserve for Doubtful Accounts	17,648,957.77	
Marketable Securities (at Market or less)	11,354,864.09	
Finished Goods (at the lower of Cost or Market)	19,580,546.29	
Raw Materials and Supplies (at the Lower of Cost or Market)	6,862,077.74	
		64,197,210.20
Prepaid Items and Miscellaneous Assets		1,116,915.97
Trademarks, Patents, and Goodwill		7,000,000.00
Total		$174,046,336.96

Liabilities

Mortgages and Purchase-Money notes assumed		$611,157.00
Current Liabilities:		
Notes Payable	$ 8,548,600.00	
Accounts Payable	14,033,431.49	
Accrued Accounts:		
Income Taxes (Estimated)	2,332,429.34	
Other items	4,017,646.89	
		28,932,107.72
Deferred Credits		426,095.19
Total		$ 29,969,359.91
*Capital Stock—The Borden Company 3,706,724 Shares Common ($25)each	$92,668,100.00	

Reserves:		
Insurance, Contingencies, etc.	12,202,237.38	
Surplus	39,206,639.67	
Total Capital Stock, Reserves, & Surplus		144,076,977.05
Total		$174,046,336.96

*On January 15, 1930, an additional 111,201 shares were issued as a stock dividend of 3% to Stockholders of record December 30, 1929.

keeping operations, but the system it uses must provide for the series of steps that have been described as the bookkeeping cycle.

10. *The comparative balance sheet.*—A balance sheet shows the condition of a business on a stated date, but it does not reveal any information concerning the changes that have taken place during an accounting period. The profit and loss statement gives a history of the changes affecting the Net Worth account. Neither one of the statements, however, shows the changes in the asset and liability accounts.

It is a very simple matter to supply the added information by preparing a comparative balance sheet. This is a statement which includes all of the balance sheet data at the end of two or more consecutive accounting periods. A comparative balance sheet may be prepared merely by setting up the money amounts as shown on the balance sheets at the end of each period in parallel columns, so that comparisons may be made. It is possible to obtain a great deal of information concerning the financial policy of a concern from such a statement.

There is no special technique involved in the preparation of a comparative balance sheet. It is a

very simple matter to make a list of the balance sheet items in adjacent columns. The interpretation of the comparisons, however, requires some knowledge of accounting methods.

Most of the corporations that publish their finan-

COMPARATIVE BALANCE SHEET
For the Years Ending December 31, 1928 and 1929

	1929	1928
Assets:		
Real Estate, Buildings, etc.	$ 51,788,892	$ 34,682,997
Investments	$606,886	$1,472,704
Current:		
Notes and Accounts Rec.	$ 22,401,704	$ 17,005,828
Marketable Securities	311,048	596,147
Inventory	67,145,034	59,762,946
Cash	37,492,165	13,942,738
Total Current Assets	$127,349,951	$91,307,659
Prepaid Items	$ 1,869,775	$ 1,889,910
Employees' Investment and Savings Plan	$ 5,996,189	$ 1,261,934
Total Assets	$187,611,693	$130,615,204
Liabilities and Capital		
Current:		
Accounts Payable	$ 6,348,747	$ 11,543,531
Due Customers	2,819,324	2,898,712
Total Current Liabilities	$ 9,168,071	$ 14,442,243
Accrued Expenses, Taxes, etc.	$ 2,492,604	$ 2,751,549
Capital:		
Capital Stock	$127,663,740	$ 65,916,595
Reserves	1,494,208	1,906,910
Earned Surplus	46,793,070	45,597,907
Total Net Worth	$175,951,018	$113,421,412
Total Liabilities and Capital	$187,611,693	$130,615,204

cial statements for the benefit of the investing public present their balance sheets in comparative form. The statement appearing on page 218 is taken from the pages of a current financial publication. It is the comparative balance sheet for one of the large mail order houses.

11. *Analysis of the comparative balance sheet.*— The condition of this business on December 31, 1929, the latest date for which information is given, is shown in the column headed "1929." This column includes all of the balance sheet data in the usual form. The second column, headed "1928," contains the balance sheet data at the end of the preceding year. All of the important changes occurring during the year are indicated in the comparisons of the items in the two columns.

The total resources of the concern increased from $130,615,204 to $187,611,693 during the year, as shown by the balance sheet totals. This means that additional capital must have been obtained from some source. This could be obtained from one of three sources, namely: (a) increase in liabilities; (b) new investment by the stockholders; or (c) profits left in the business. The liabilities actually decreased during the year, so the new investment could not have been obtained from that source. Capital stock, on the other hand, shows an increase of $61,747,145, an amount greater than the increase in total assets. This would indicate that a considerable amount of new capital was invested in the enterprise by the

stockholders. Surplus increased by $1,195,163, which shows that some of the profits, at least, were retained in the business.

A comparison of the asset items in the two columns shows how the new capital was invested. It is clear that slightly more than $17,000,000 was added to the fixed assets, as shown by the figures for real estate, buildings, etc. A little more than $6,000,000 was added to the inventories carried, and a considerable amount of the new capital is still in ready cash, not invested in any form of tangible property. The increase in notes and accounts receivable would indicate that the company has been expanding its credit business and has used additional capital to carry its customers' accounts.

These are all facts of considerable importance in analyzing the operations of the company for the year. Further information is obtained from comparison of the other items in the statement, but these are sufficient to illustrate the use of the comparative balance sheet for the purpose of analysis.

12. *Summary.*—The analyses of the balance sheet statements in this chapter have been given for the purpose of showing the importance of this form of accounting report. It is the basis of the whole structure of accounting records. The technique of the double entry system is based upon the balance sheet. All of the ledger accounts are reflected in this statement and transactions are analyzed in the light of their effect upon the balance sheet classification.

After all of the adjusting and closing entries have been recorded, the accounts contain strictly balance sheet data.

The routine of recording accounting data has been described in earlier chapters and the methods of preparing the statements have been explained. This completes the discussion of the fundamental principles underlying all accounting methods. There are a great many questions of analysis, however, which should be considered in applying these principles to specific cases. These are, for the most part, questions of refinement and theory. They should not cause any particular difficulty, if the fundamental principles are constantly kept in mind. The remaining chapters of the Text are concerned with the special questions and problems which arise in practice.

REVIEW

State the limitations of the balance sheet with respect to its purpose of showing the true financial condition of an enterprise.

Name the principal classes of items on each side of the balance sheet.

Give the basis for the distinction between fixed and current assets.

Explain what additional information a person should have in interpreting a balance sheet, besides the money amounts in the account balances.

What information may be obtained from a comparative balance sheet that is not included in a single statement?

CHAPTER XIV

ACCOUNTING FOR DEPRECIATION AND OTHER RESERVES

1. *The meaning of depreciation.*—Depreciation is the term commonly applied to the decline in value of fixed assets. All physical fixed assets, with the exception of land, ultimately become worthless and must be replaced. They may be used up in a fairly short time or they may remain in service for a great many years. In either case, the value of an asset decreases during the period that it is used by a concern. A building that costs $100,000 may be used for twenty years, and then be dismantled to give way to a new structure. If the materials salvaged from the old building are sold for $2,000, the total depreciation would be $98,000. This represents an expense of the entire twenty-year period, just the same as the cost of fuel consumed is an expense charge of a single accounting period.

Depreciation is an expense charge measured by the amount of fixed assets consumed. Stated in this way, it appears to be a very simple matter, but, in actual practice, it constitutes one of the most difficult problems in accounting. The difficulty arises chiefly in determining the amount of depreciation that may

properly be charged to the expense accounts of each accounting period. It is a very simple matter to say that total depreciation of a building is $98,000 at the end of its service life, but it is quite a different matter to determine at the end of each year during its life just how much should be charged for depreciation. If the accountant knew definitely the exact date in the future when the building would be dismantled, and also the amount of salvage value, he would have very little difficulty with the depreciation problem. These two important facts, however, cannot be known definitely until after the building has ceased to be used for productive purposes. In other words, the exact amount of the total depreciation and the length of life are not known definitely for twenty years. Income statements and balance sheets must be made up at the end of *each* year, so it becomes necessary for the accountant to make certain estimates of service life and salvage value as a basis for the annual depreciation expense charge.

2. *Factors of measurement.*—There are three important facts that must be determined before the exact amount of depreciation is known, namely: the cost of the asset, the length of its service life, and the residual or scrap value at the end of its useful life. The first of these is the only definitely known quantity at any time during the life of the asset. It is necessary, therefore, to estimate the other two elements in order to apportion the total depreciation expense to the annual profit and loss statements.

This may appear to be a mere guess on the part of the accountant. Let us assume, for example, that some equipment is installed in a factory, in 1930, at a cost of $50,000. The accountant estimates that it will be in service for a period of fifteen years, at the end of which time it will have a scrap value of $5,000. This means that he estimates the total depreciation at $45,000 and that this sum must be spread over the expense accounts of the fifteen years. His estimates cannot be definitely checked until the equipment is scrapped.

It is not entirely a matter of guesswork, however, as is shown by the fact that the annual amounts charged for depreciation usually come fairly close to the correct totals. This is due to the fact that experience tables for the service lives of different types of equipment and structures have been compiled, which are of assistance in making estimates. These tables show the average life of a great many units of similar types of property.

3. *Causes of depreciation.*—The chief causes of depreciation are wear and tear from use, and the wear resulting from mere lapse of time. These causes can be measured with a fair degree of accuracy. Another factor that tends to shorten the useful life of an asset is *obsolescence*. New inventions frequently render valueless some machinery that is still in first-class operating condition.

Developments of this sort cannot be predicted with any degree of accuracy. Furthermore, a decline in

the value of an asset due to the invention of improved types is not, strictly speaking, in the nature of depreciation. Let us suppose, for example, that a firm has an investment of $25,000 in a certain type of machinery which is rendered obsolete by the introduction of a new method of production. The investment in the old machines suddenly becomes worthless, and should be charged off the books as a *loss,* not as an expense.

The service life of assets is estimated for the purposes of depreciation on the basis of the factors of wear and tear from normal use. Allowances for possible obsolescence are made through other accounts.

4. *Depreciation methods.* — There are several methods of computing the amount of the depreciation charge to be made in each accounting period during the service life of a property item. The problem consists in determining how much of the estimate for total depreciation should be allotted to the expense accounts of each year. There has been a great deal written on this subject from both the theoretical and practical points of view. There are four standard methods that have evolved from the great number of suggestions made by different writers. These are as follows:

(a) The straight line method.
(b) The sinking fund method.
(c) The annual revaluation method.
(d) The fixed rate on the declining balance method.

5. *The straight line method.*—Under the straight

line method, the same amount is charged off each year. If the total depreciation is estimated at $45,000 and the service life at fifteen years, the annual charge would be $3,000. This is the method most commonly used in practice. It is based on the assumption that the value of the asset declines the same amount each year. The expense charge of the fifteenth year is the same as that of the first year.

It is called the straight line method, because the net value of the asset as carried in the balance sheet is reduced each year by the same amount. If the valuations were charted on a graph, they would be represented by a straight line. That is, the line would start at a point representing the cost and would end at a point on the same scale representing the scrap value. The value on any intermediate date would fall on a straight line connecting the two points.

The straight line has the advantage of simplicity. It is easily computed and probably approximates the actual costs involved each year as closely as any other method. The disadvantage of this method is that the depreciation charge for the first year, when repairs are low, is the same as it is for the last year, when maintenance and repairs are probably higher.

6. *The sinking fund method.*—Some concerns set up a special fund to take care of depreciation. At the end of each year, a certain sum of money is placed with a trustee or is invested by the company. This fund accumulates during the life of the asset to an amount equal to the total depreciation. In view of

the fact that there will be an income on the fund in the form of interest, it is unnecessary to put into the fund, in the annual installments, the full amount needed to replace an asset. If, for example, the total estimated depreciation is $45,000 and the service life is fifteen years, it would be necessary to place only $2,085.40 in the fund each year to accumulate to the required amount, if interest is figured at 5 per cent. This amount is computed by intricate mathematical formulæ or else with the use of annuity tables. Under the sinking fund method, the annual charge would be $2,085.40, and the difference between the total amount charged at that rate per year and the $45,000 would be accounted for in the interest obtained on the fund, at the rate of 5 per cent.

This method is not widely used, because it involves placing, in low interest-bearing investments, funds that might better be used in the business. It is applicable to business concerns that are not expanding their operations and whose capital assets consist of large units.

An adaptation of the sinking fund method, known as the compound interest method, is sometimes used. Under this plan, the amounts to be charged each year are computed on the sinking fund method, but each year the charge is increased by an amount equal to the interest that would be received if a fund were maintained. If the charge for the first year were $2,085.40 and the interest rate were 5 per cent, then the charge for the second year would be

$2,189.67. This is found by adding the amount of interest that would have been earned on the first year's contribution at 5 per cent if it had been placed in a fund. The next year the charge would be increased by the interest on the two preceding installments and would amount to $2,309.15. By the end of the fifteenth year, a total of $45,000 would have been charged to expense by this method. This method is based upon the assumption that the funds reserved by a depreciation charge produce an income even though they may not be placed in outside investments. It is proper, under these conditions, to increase the charge for depreciation each year by an amount equal to the assumed additional earnings.

7. *The annual revaluation method.*—Some concerns adopt the policy of reappraising all of their fixed assets every year. The difference between the valuations at the beginning and the end of the year is the amount of the depreciation for the year. This assumes that it is possible for a person to determine the value of property items by inspection. There are some types of property that can be appraised in this way.

Real estate appraisers are adept at valuing buildings under leaseholds and other standard forms of structures. In most cases, however, an appraiser is unable to supply any more accurate estimates of value than the accountant would obtain by using one of the standard methods of writing off the estimated depreciation.

Appraisals usually are costly and are not used, except in cases of reorganization or at times when new financing is undertaken. It is a good policy for a concern to check up on its estimates of depreciation every few years by having a complete appraisal of its property. Annual appraisals, however, are not essential and would constitute a needless expense.

8. *The fixed rate on the declining balance.*—This method is based on the assumption that an asset declines in value more rapidly in the early years than in the later years. The amount to be charged each year is determined by finding the rate in per cent, which, applied each year to the reducing debit balance in the Asset account, will take care of the total depreciation during the service life of the item.

In theory, at least, this method equalizes the full depreciation charges and renewals over the several years of the life of the asset. When assets have been acquired at various times, however, and when the useful lives of these assets have varying expirations, it is not easy to ascertain the status of any particular asset; nor can it be said that this method is always the most accurate and satisfactory. This method is not used extensively, although it has been enthusiastically endorsed by some accountants.

9. *Depreciation of intangible assets.*—Most of the difficult problems of depreciation are concerned with physical property items. Intangible assets, such as goodwill, trademarks, patent rights, etc., are usually considered in the group of property items that are

subject to depreciation. It is true that they are not subject to wear and tear from use, but their values do change. Patents and copyrights are granted for definite periods of time. The cost of acquiring such rights should be amortized or written off the books in the same way as depreciation of tangible assets.

Goodwill is the capitalized value of the profits that a concern earns in excess of the normal or average rate in the industry. It is not recognized as a valid item, however, except in case of purchase. If one concern purchases the business of another and pays for the goodwill value, it is treated as an asset. Goodwill is sometimes brought into the accounts in the reorganization of corporations, when stock is issued in excess of the net value of the tangible assets. It is considered poor accounting practice to increase the valuation of goodwill on the books of a going concern, even though the earnings may be increasing.

The maximum valuation of goodwill at any time, therefore, is its actual cost to the concern. Some accountants maintain that goodwill should not be written down by depreciation charges. They claim that its value does not decline as long as profits are maintained at the level anticipated at the date or purchase. If earnings do not come up to expectations, on the other hand, it means that the original valuation was too high. Even in this case, there is some objection to charging off a part of the value as an expense, because to do so would further reduce the statement of net earnings.

Many accountants, however, favor a policy of gradually reducing the goodwill item through annual depreciation charges. It is considered conservative accounting practice to charge off the cost of goodwill, entirely, within as short a period as possible without unduly burdening the profit and loss statement. A number of the larger corporations call attention to the fact that they have adopted this policy by listing goodwill on the balance sheet at the nominal figure of one dollar.

All other intangible assets should be written off according to the number of years that they are expected to contribute to the earning capacity of the enterprise. The expected life seldom corresponds to the legal life. A patent right, for example, protects a concern for a period of seventeen years, but newer inventions are bound to render the patent valueless in a much shorter period. Some of the larger corporations charge the whole cost of acquiring patents directly to expense, on the assumption that their value is so short-lived as to make it inappropriate to list them among assets, at all.

10. *Depletion of mines, oil wells, etc.*—Profits from mines and oil wells are derived from the sale of the products taken from the ground. The greater the amount of product extracted in a given period, the greater the profits will be and, at the same time, the less valuable will be the remaining property. The income from the sale of every ton of coal includes a part payment for the original investment in the mine

property. Some account should be taken of the decline in residual property values in this type of enterprise, in order to protect the capital of the investors.

The charge made against the profit and loss accounts of a mining or oil concern to cover the decrease in value of the property is called *depletion* instead of depreciation. The amount of the annual depletion charge is based upon the output for the year. It is possible to estimate fairly accurately the amount of coal or ore in a given vein. The cost of acquiring the land or the rights to mine, divided by the number of tons estimated to be in the vein, gives a unit cost figure. This unit cost figure, multiplied by the number of tons taken out in a year, gives the proper depletion charge.

The depletion charge is an offset to the income from the sale of the product of the mine. Since income is represented by the receipt of cash or its equivalent, it is clear that the depletion charge tends to establish an asset fund equal to the depletion charge. By the time the mine is exhausted, there should be a fund of cash, or other assets, equal in amount to the original investment in the mine. This fund can then be returned to the stockholders to cover their original investment.

Failure to recognize depletion would cause an overstatement of each year's profit. If all of the net profits were paid out in dividends, there would be no funds on hand when the mine becomes exhausted, and the stockholders would have nothing left to show

for their investment. The dividends which they had received during the life of the mine would have included payments in the nature of a return investment.

Some mining concerns have adopted a policy that is in reality a compromise between a full recognition of depletion and a failure to account for it altogether. There is no particular reason why the officials of a mining property should hold the funds reserved by a depletion charge until the mine is exhausted. It is just as well to return them to the stockholders currently, provided they are not paid out as dividends. This is done by sending the stockholders two checks, one for dividends, to cover profits, and the other a return of investment, to cover depletion. This is doubtless the best method of accounting for depletion in an enterprise that is organized to exploit one particular mine or oil well.

11. *Accounting for depreciation.*—Up to this point, our discussion has been concerned with the methods of determining the amount of depreciation or value decline of assets. These are the most difficult questions involved in the depreciation problems, but the methods of recording the data are also of significance. There are two methods of entering depreciation on the books. One of these is to debit the expense account and credit the particular asset account. If the amount of depreciation on the machinery for a year amounts to $3,000, the journal entry will be as follows:

Depreciation Expense	$3,000	
Machinery		$3,000

This entry brings the proper amount into the expense of the period and reduces the balance appearing in the asset account.

The other method of entry will be as follows:

Depreciation Expense	$3,000	
Reserve for Depreciation		$3,000

The debit part of the entry is the same as in the first one, namely, a charge to depreciation expense. The credit part of the entry, however, is made to an entirely different account, Reserve for Depreciation. Under this method, the machinery account remains at the cost figure and a new account is opened to take care of the credits.

12. *Reserve for depreciation a valuation account.* —This second type of entry for recording depreciation is the cause of no little confusion in the minds of those not thoroughly acquainted with accounting technique. Fundamentally, there is no difference at all between the journal entries given above.

In the first case, the credit was made *directly* to the asset account, whereas in the second case, the credit was made *indirectly* to the asset account. This is simply one way of saying that the Reserve for Depreciation is a part of the Machinery account. It is an account in which the credits are placed temporarily. In other words, the reserve for depreciation is a subdivision of the asset account to which it refers.

It is classified as a *valuation account,* because it serves to offset the valuation which is overstated in the main account.

The difficulty encountered in interpreting the Reserve for Depreciation account would disappear, if it were deducted from the main account in order to determine the net valuation of the asset involved. This method of reporting was used in the balance sheet of the Borden Company given on pages 216 and 217.

13. *Disposition of the Reserve for Depreciation account.*—The Reserve for Depreciation account is set up for the purpose of keeping the credits from the depreciation expense entries separate from the asset account. This enables the concern to keep a continuous record of both cost and net value figures for its fixed assets. The Machinery account would always show the cost of machinery in use, while the Reserve for Depreciation account shows the amount which has already been charged off as an expense.

The credit balance in the Reserve for Depreciation account increases each year during the life of an asset by the amount of the debit to depreciation expense. If the estimate proves to be correct, the credit balance in the Reserve account will be equal to the total depreciation at the time an asset is retired from service. Let us suppose, for example, that some machinery having an estimated life of fifteen years and which originally cost $50,000, is sold as scrap for $5,000 at the end of that time. The entry covering this transaction will be as follows:

Cash	$ 5,000	
Reserve for Depreciation	45,000	
Machinery		$50,000

This entry causes the Machinery account to be reduced by the cost of the machinery, and the Reserve for Depreciation to be reduced by the amount of the total depreciation. In case the estimate proves to be in error, the difference between the amount in reserve for depreciation and the total depreciation will be charged against or credited to the Profit and Loss, or to Surplus or Net Worth account.

14. *Reserve for uncollectible accounts.*—A valuation account somewhat similar to the Reserve for Depreciation is found in some statements to cover the anticipated losses from uncollectible customers' accounts. In some lines of business, the losses from this source constitute a normal cost of operation. At the end of an accounting period, an estimate is made of the probable losses that will occur on the outstanding customers' accounts. An expense account is charged and the Reserve for Uncollectible Accounts is credited with this amount.

The reserve for uncollectible accounts is an offset to the accounts receivable on the balance sheet. It is possible to tell just which particular accounts will prove to be worthless. The reserve, therefore, covers the expected losses from the whole group of accounts.

15. *Computing the reserve for uncollectible accounts.*—There are two standard methods of computing bad debt reservations, both of which are based

upon the past experience of the business concerned. The first method is to set aside regularly a certain percentage of the total outstanding accounts. If at the end of the month, for example, there is outstanding $100,000 of accounts receivable, and past experience shows that the percentage of losses runs to 3 per cent of outstanding accounts, the reserve for uncollectible accounts should be $3,000. At the end of the following month the reserve would be adjusted so that it would amount to 3 per cent of the accounts then outstanding. This adjustment would be made through the Net Worth account.

The other method, and the more favorable one, is based upon the assumption that only a certain percentage of a given volume of sales will be collected. If, for example, the experience of a concern shows that over a period of years its losses have been 2 per cent of its sales, then, out of each month's or each year's gross sales, there should be set aside 2 per cent, which will be charged to expense and credited to the reserve for uncollectible accounts. It will be seen that the amount of the reserve under this method bears no direct relation to the outstanding accounts at any period of time. The periodic reservation is always based upon gross sales and constitutes an addition to the amount already carried in the reserve account.

This method seems more logical, since it is evident that the bad debts bear a more direct relation to volume of sales than they do to outstanding accounts.

Furthermore, the policy of many organizations is lax with respect to the writing off of bad accounts and in classifying accounts according to the degree of doubt as to collection. In such instances, if the reservation is based upon the amount of outstanding accounts at any time, it may prove to be inadequate.

16. *Accounting for the reserve for uncollectible accounts.*—When reserves for uncollectible accounts or any other reserves are set up, the expense charge arises when the reservation is made and not when the actual loss is sustained. The loss is anticipated in the amount reserved. This is illustrated in the following entries, which have to do with the uncollectible accounts of a business:

Expense (or profit and loss)	$2,000	
Reserve for Uncollectible Accounts		$2,000
Amount reserved for month of January		
Reserve for Uncollectible Accounts	$ 500	
Accounts Receivable		$ 500
To write off against the reserve the loss on the account of The Milan Co.		

The first entry is an expense charge to cover the estimated monthly average of total losses, based on 2 per cent of sales amounting to $100,000. The second entry transfers the actual loss on one account from Accounts Receivable to the reserve account. This transfer is not made until a loss is definitely ascertained.

17. *Service reserves.*—There are numerous other

reserves found, though none is as common and standardized as the reserves for depreciation and the reserve for losses from uncollectible accounts. Some concerns are engaged in a type of business that requires the rendering of services after the sales have been made. In such cases, a reserve should be set aside out of each sale sufficient to cover the cost of service to be rendered. If this is not done and each gross sale is stated at its full face value in the income account, the income of a period is overstated by the value of the services still to be rendered.

This will be clearer, perhaps, if a typical case is used as an illustration. Let us assume, for example, that an automobile dealer gives a guarantee of three months' service on every car that he sells and that this service on the average costs $50 per sale. If he does not charge income with $50 on the sale of each car, to cover service to be rendered in the future, he is overstating his profits on current sales. If the equivalent funds are withdrawn as profits, the subsequent payment of service expenses may seriously deplete the supply of current assets.

When such a reserve is set aside, the expenses actually incurred for the service will be charged against the reserve and not against the income of the period in which service is rendered. When such expenses are charged to the reserve, they should not be charged directly but rather accumulated in separate classified accounts, the total of which will be deducted from the reserve at regular intervals. This total

should always be considered in conjunction with the balance in the reserve, when the status of the reserve account is to be ascertained. These separate expense accounts are desirable in order that the executive may know how much is being expended for the various kinds of service chargeable against the reserve and how closely his estimates of these expenses approach the actual costs involved.

18. *Contingency reserves.*—Reserves are sometimes established to cover unforeseen contingencies. These are reserves set aside—usually out of profits—to provide for exceptional losses. Insurance companies often carry contingency reserves to protect their capital and surplus accounts from exceptional losses beyond their regular reserve requirements.

The provision for obsolescence of equipment is a type of contingency reserve. A manufacturing concern cannot tell how soon a new invention may render all of its present equipment completely worthless. A special account set up to meet such a contingency will enable a company to meet the situation without making serious inroads on its capital and surplus accounts.

Contingency reserves are, in reality, a part of the surplus and, as such, differ materially from the valuation accounts that have been described above. In a sense, all of the surplus and net worth accounts are contingency reserves because, in case of exceptional losses, it is the equity of the proprietors that suffers first.

19. *The term "reserve" is used in different senses.* —There are several different meanings attached to the word "reserve" in accounting. The depreciation and uncollectible accounts reserves are valuation accounts. They are, in fact, offsets to certain asset accounts. A second group of reserve accounts may be classed as actual liabilities. Examples of this type are reserves set up for taxes and other accrued items. Some concerns use the term "reserve" to cover all of the liability accruals at the end of an accounting period. A third type is represented in the contingency and other surplus reserves, such as the Reserve for Appreciation. Sinking fund reserves and reserves for additions or improvements are included in this class. These will be considered more fully in Chapter XIX.

In view of the fact that the term "reserve" may be used in all these senses on a single balance sheet, it is essential to have a clear understanding of each type. It is usually possible to determine which kind of reserve is involved by the context of the account title.

It will be noted that no attempt was made to include in the illustrative set of accounts for A. Roberts, discussed in earlier chapters of this Text, a "Reserve for Uncollectible Accounts" account, or a "Reserve for Depreciation of Furniture and Fixtures" account. However, the discussion in this chapter is sufficient to enable the reader to understand just how these accounts operate.

REVIEW

Name the factors that should be considered in determining the amount of total depreciation.

Give an illustration of the use of the straight line method of measuring depreciation.

State the circumstances under which the sinking fund method of depreciation is applicable.

Give the objections to the use of the revaluation method of depreciation.

Show how the reserve for depreciation account is treated when an asset is retired from service.

CHAPTER XV

APPRECIATION AND DEPRECIATION

1. *Balance sheet valuations not always true values.* —The statement has been made repeatedly that it is the purpose of the balance sheet to show the true condition of an enterprise However, many factors intervene to cause the true values to fluctuate above or below the values carried on the books. No attempt is made to record some of these fluctuations on the books, either because they are only temporary, or because they are changes which cannot be measured by the accounting records. As a result, balance sheet figures do not always show true values.

An attempt is made in accounting, however, to measure many of these fluctuations and to express their results in the records. In view of the common acceptance of conservatism as a prerequisite to successful accounting, it becomes decidedly more important to show in the records the effects of the changes which have reduced the value of assets than to show those changes which may have increased values.

An increase in the value of a building, for example, is seldom expressed on the books as a part of the regular accounting procedure, unless the building is

held as an investment with the intent of reselling. Only under unusual conditions would an increase in the valuation of an asset of this type be entered. On the other hand, if a building used for manufacturing purposes has decreased in value by virtue of the wear and tear in use, as it surely must, then this decrease in value becomes a part of the cost of operating the business during the period, a cost which should be charged to operating expense.

2. *Effects of fluctuations in value.*—It will be recalled that, in the profit and loss statement, the excess of income over expenses for a period constituted the increase in net worth for the period. In the balance sheet, it was shown that net worth was the net excess of assets over liabilities. Therefore, if there have been no additional investments or withdrawals of proprietor's capital during a certain period of time, then the profit for that period can be obtained by subtracting the net worth at the beginning of the period from the net worth at the end of the period.

The foregoing reveals that the changes measured by the income and expense accounts have also been reflected by changes in the assets and liabilities. Hence, the net income for a period, whether it is determined by subtracting expense accounts from income accounts or by subtracting net worth at the beginning of the period from net worth at the end of the period, must be the same.

Thus it becomes possible to ascertain the net worth

of a business by taking periodic inventories of assets, by enumerating the liabilities and then subtracting the total liabilities from the total assets. If this procedure is followed regularly, each increase in net worth of one period over the preceding period will be the profit for that period, assuming that there have been no additional investments or withdrawals of capital and that each asset is valued on the same basis at the beginning and end of each period.

If the value of any asset at the end of a period has increased over the value at the beginning of the period, the increase being due not to additional investments but rather to a temporary rise in market value, then, unless this increase in value is recorded, the net worth as determined by the appraisal method is going to be greater than the net worth as shown by the books and, at first glance, the books would seem to present an incorrect view of the condition of the business. If values had decreased, there would also be a corresponding discrepancy, but of an opposite nature. Consequently, we are confronted with the problem of reconciling these variations and adjusting the records so that they will present a reliable statement of the business condition. As will be seen, not all variations in values are recorded, since some of them are temporary only and, hence, unimportant to the permanent operation and direction of a business.

Among the types of changes in value which should be recorded is depreciation. This is justified, for

example, in those cases where the cost of manufacturing is dependent partly upon the consumption of labor and materials and partly upon the consumption of machinery and other fixtures or equipment used in manufacturing processes. Again, there may be certain assets which, though not used in actual manufacturing, are still a part of the business and decrease in value through business use; if so, the net worth of the business becomes automatically less than it would be if these asset values had remained constant. Consequently, the accounting records must provide a means of measuring all such changes.

3. *Measuring changes in value.*—The changes in value that are to be measured are those that are permanent in nature. The most obvious method of measurement is to take a complete inventory through a regular periodical appraisal of assets. There are some objections to such a procedure, the main ones being (a) the impracticability of obtaining uniformly accurate appraisals, (b) the time required to make such appraisals, (c) the cost both in time and service in obtaining appraisers who are capable, and (d) the fact that it would be unwise to burden the income or expenses of any one period with temporary fluctuations in market value which might later be offset entirely through fluctuations of an opposite nature.

4. *Temporary fluctuations unimportant.*—This last point is worthy of further elaboration. When capital is invested in a business, the investor expects a return in the form of income from this investment

and measures the value of his investment by the return which it brings to him. It is immaterial whether investments are made by original contributions or whether they come from an accumulation of profits which the proprietor does not withdraw. This capital fund is invested in the various assets that are essential to the conduct of the business. Other assets may be acquired through the creation of liabilities and are included with those acquired by the expenditure of capital funds. The two become inextricably mixed so that the respective interests of the proprietor and the creditors can not be related to any particular asset, except when specific assets are pledged to secure certain creditors.

This combined fund of capital invested and funds borrowed, then, is the element with which the business is financed and through the use of which the proprietor's income is earned. Since this is true, the proprietor does not concern himself with the temporary market fluctuations in the values of any of his assets, other than those which are his stock in trade and which are held for resale by him. The only changes that will permanently affect the amount of his investment or the amount of his profits are those which arise through wastage resulting from the ordinary conduct of business, decreases or increases in value due to the passing of time, and the changes in business which result in a permanent loss of value from any other cause. This final factor is illustrated in the case of a machine, which becomes valueless be-

cause of the invention of another machine that will do the required work better, or cheaper, or both.

5. *Increases in value not usually recorded.*—Increases in value are seldom recorded, unless these increases are known to be permanent, or unless some special circumstance arises to justify changing the book values. However, since every executive is interested in permanent increases in value, the question often arises as to the proper procedure to be followed.

As an illustration, a building costing $75,000 may be worth $100,000 after a few years. If physical inventories were taken from year to year and book values adjusted accordingly, the proprietor would be justified in putting a valuation of $100,000 on this building and, in turn, increasing his proprietorship account by a like amount. The consequence might not be serious in the case of a sole proprietorship, yet the situation would be entirely different if the same procedure were followed with respect to a partnership or corporation. The appreciation of $25,000 would increase the book record of net income, as well as the profit available for distribution to partners or stockholders.

The increase in profits or proprietorship, however, would not have been offset by any increase in available current assets and the withdrawal of these extra profits would, without question, cripple many an organization by reducing its working capital below the danger mark.

Since working capital is that portion of the capital funds that have been set aside to insure the continuance of a business, a gradual increase in working capital must go hand in hand with any expansion of business. Whenever profits are distributed to the owners, the funds of a business will be permanently reduced by the amount of such distribution. Since distribution of profits is made from current assets, and since working capital is represented in the same assets, care must always be used, in planning distribution of profits, to see that the amount of current assets is not reduced below the figure essential to maintain an adequate working capital. Permanent assets, such as buildings, machinery, and the like, can not be distributed, so that any increase in profits resulting from an increase in value of such assets does not provide any increase in the assets of the type that can be withdrawn, in turn, by the proprietor.

If, for one reason or another, it does become desirable to record the permanent increase in the value of any asset, this increase should never be credited to the proprietorship account, but rather to some other account that will, by its nature, indicate the source of the credit. The account most commonly used is called "Reserve for Appreciation." The entry for recording the appreciation on the building mentioned above would be as follows:

Building	$25,000	
Reserve for Appreciation		$25,000

To record permanent increase in value of building as per appraisal of The Brown Co. on December 1, 1930.

6. *Need of providing for depreciation.*—In the previous chapter, depreciation was defined, and a discussion was given of the factors of measurement and causes of depreciation, together with a brief summary of various depreciation methods. With an understanding of what depreciation is and of its cause, let us consider other points of importance.

Every business man must realize that, since depreciation reduces the value of his assets, it must be provided for in his balance sheet or public opinion concerning the conservatism of the values stated there will be unfavorable. More important is the fact that depreciation has a direct effect upon the profits of a business. In fact, depreciation is a part of the cost of doing business and, as such, should be charged in with the other operating expenses.

There is another phase of depreciation that often receives insufficient attention. As equipment wears out, some provision for replacing it must be made. A concern will often fail, unintentionally, to accumulate funds as rapidly as they are needed for replacement of worn-out equipment, unless some special measures are provided to compel the withholding of funds for that purpose.

The importance of regularly providing for depreciation cannot be emphasized too strongly. Organi-

zations will frequently be found where depreciation has been ignored for years. Sometimes the proprietors have assumed that, by keeping their assets constant and in proper repair, they have not only expended large sums of money on their equipment but have obviated the necessity of further provisions. The fallacy of this argument will be appreciated, if the subject of obsolescence is borne in mind. In reality, the argument defeats itself, since, if they have had to expend large sums in the past, it is obvious that as time goes on and as the assets grow older their expenditures of this nature will increase.

7. *Valuation of land.*—The land on which the building of an industrial or commercial enterprise is located is one type of an asset that seldom depreciates. There are cases, however, in which site values decrease because of the shifting of population. If several manufacturing concerns find it advisable to move to a new community, nearer to the source of their raw materials or the markets for their finished goods, the value of the land used for industrial purposes in the old community is likely to decline. But conditions of this sort are exceedingly rare. Under normal conditions, industrial sites tend to rise in value as population increases.

A concern which purchased its plant site in 1900 would, as a rule, be able to dispose of it at the present time, in the open market, at a figure considerably above its cost price. The present sale value of any parcel of land can be determined readily by reference

to the sale prices of lots in the immediate vicinity. Real estate appraising is an important part of the work of a modern realtor. It is a simple matter, therefore, to obtain reasonable valuation figures for land, separate from the buildings and structures. Appraisal of the company's land should be made from time to time and, when the occasion warrants it, the new valuations should be entered in the accounts.

8. *Appreciation offset by depreciation.*—It is sometimes argued that neither appreciation nor depreciation need be recorded on the books because one offsets the other. This is a fallacious notion. It is true that land usually appreciates in value and that buildings normally depreciate. It also may be true that the monetary amount of appreciation in the land values is the same as the depreciation on buildings. In other words, it is possible that the value of land and buildings, taken together, may remain the same year after year. Even if this is true, however, it would be entirely incorrect to assume that the element of appreciation offsets depreciation. These are two separate and distinct factors that should not, in any case, be placed in the same category.

Depreciation of fixed assets is an expense of doing business. It is a deduction from the gross income derived from the sales of the company's product or service. Appreciation, on the other hand, is an increase in net worth entirely apart from business operations. If appreciation were used to offset the depreciation charges, expense would be understated

and net profits from operation would be correspondingly overstated.

One of the chief purposes of accounting statements is to show the true sources of income and causes of expense. This cannot be done if such unlike items as appreciation and depreciation are lumped together. There is no logical basis upon which one may be used to offset the other. There are two fundamentally different problems of accounting analysis involved in the treatment of appreciation and depreciation.

9. *Creating the reserves.*—It has been stated that, in accounting for depreciation, a reserve account is used. It may seem peculiar, therefore, that appreciation is measured in the accounts by a reserve, while depreciation, the exact opposite of appreciation, is also measured by a reserve. Upon analysis, however, it will be seen that reserves must always be considered in conjunction with the accounts to which they relate.

The appreciation reserve is set up to recognize increases in the value of an asset and, at the same time, to avoid overstating the distributable profits of the business; the depreciation reserve is set up to measure the true value of the asset to which it relates, and also to withhold from free profits amounts that will be required in a subsequent period for replacement.

10. *Valuation of current assets.*—The terms "appreciation" and "depreciation," as a rule, do not ap-

ply to changes in the value of current assets. This is due to the character of the items that comprise the current asset classification. The raw materials and merchandise inventories, in which the greater part of the working capital is invested, are kept in stock for relatively brief periods of time. Furthermore, they are consumed or disposed of in single units, whereas the fixed assets are kept in service over a long period of time. It can hardly be said that these smaller units appreciate or depreciate in the same way as buildings and machinery.

The prices of current assets do fluctuate, however, even though the specific items do not remain in the possession of the business for any considerable period of time. In fact, the prices of goods on hand sometimes change so quickly that very heavy losses are incurred or exceptional profits are realized. In 1921, the price of crude rubber fell so rapidly that several of the large tire manufacturing companies were forced into bankruptcy. On the other hand, prices had been rising so rapidly, during the years 1919 and 1920, that more profits were made on the increasing value of inventories than were made on manufacturing operations.

These price changes are taken into account in the inventories rather than in special reserve accounts for appreciation and depreciation. At the end of each accounting period, the amount of goods on hand is inventoried, as was shown in Chapter X. Every item in the inventory must be valued on the basis

of price figures. The prices that prevail on the inventory date may be higher than the cost figures, lower than cost, or equal to cost. The question arises as to which figures should be used.

The rule that has been adopted by most accountants is to value the inventories at cost, unless the current market figures are lower, in which case the market prices are used. This means that a decrease in the value of the inventories, due to price changes, is taken into account, but an increase is not.

If, for example, a stock of merchandise on hand at the end of a year actually cost $100,000, but could be replaced at current prices for $75,000, it would be carried on the balance sheet at the latter figure. On the other hand, if the prices had been rising so that, at current market quotations, it would cost $125,000 to replace the goods, the inventory would be valued at $100,000. This is an arbitrary rule, but it has gained such wide acceptance that it may be taken as representative of current accounting practice.

11. *Realized and unrealized profits.*—The rule for the valuation of current assets, as stated in the preceding section, appears to be somewhat illogical. It takes into consideration the losses that occur as a result of an adverse price change, but does not recognize, as a profit, the increase in the value of an inventory when prices rise. This rule is based on the assumption that a profit is not realized until a sale takes place. That is, if the value of goods on hand

increased by $25,000, it could not be assumed that a profit of that amount had been earned until the merchandise was actually billed to customers. This means that the profits resulting from such a price rise will not be recorded until a subsequent accounting period.

From a long-time point of view, this makes very little difference, because the profits will eventually be recognized. It does make a difference, however, in comparing the profits of one accounting period with those of another. Is it proper to assume that the benefits derived from a rise in prices in 1930 are profits of that year, or of the year 1931, when the goods are sold?

There can be no doubt as to the fact that the $25,000 is a profit solely from the price changes and is not due to normal manufacturing or trading operations. This is true, regardless of whether the profit is entered in the accounts in 1930 or in 1931. From the standpoint of strict logic, it would seem proper to record the increase in a special type of profit in the year in which the price change takes place. If we accept the definition of realized profit as stated above, however, it will be treated as an ordinary operating profit of the year in which the goods are sold.

12. *Recording exceptional inventory losses.*—According to the accepted rule for valuing inventories, the lower of cost or market prices is always taken. There are occasions when prices fall with such rapid-

ity that exceptional losses are incurred. The case of the fall in prices of crude rubber, mentioned on page 254, is a case in point. One large tire manufacturer lost $18,000,000 on the difference between cost and market prices of its inventories on December 31, 1921. In the normal process of closing the accounts, this would be absorbed in the operating expenses for the year.

The manager of this concern might object to this procedure, because it would make the ordinary manufacturing expenses appear exceptionally high. As a matter of fact, the manager would have had no control whatever of that particular expense item. The change in price was caused entirely by outside forces. It was a loss to the concern, but it was not an expense.

In order to prevent a price change of this sort from distorting the expense accounts for comparative purposes, it might be charged directly to profit and loss, as follows:

Profit and Loss	$18,000,000	
Inventories		$18,000,000

After this adjusting entry is made, the inventory accounts will show only the current market values. The expense accounts will then include the amount of materials consumed at an equitable figure. This method of accounting for exceptional inventory losses has been adopted by many corporations.

13. *Valuation of quoted securities.*—Attention

should be drawn to another class of assets, before we leave this discussion. Some companies own a considerable amount of stocks and bonds that are quoted currently on the several stock exchanges. These securities are held for various purposes, depending upon the nature of the enterprise and its financial policy. They constitute the stock in trade of investment trusts and securities dealers and are a part of the liquid resources of other corporations.

The prices of securities are quoted every day, making it possible to know the value of a company's holdings at any time. How should these items be inventoried for balance sheet purposes? There is a wide difference in practice. Some concerns keep their security holdings on the books at cost, regardless of market quotations, until they are sold. Others value them at cost or at current market prices, depending upon whichever is lower.

The current market quotations are more significant in this class of assets than in any other. Changes in the prices of securities have a pronounced effect upon the financial standing of concerns that hold them either for speculative purposes or for a part of their working capital reserve. Decreases in prices, therefore, should be recorded immediately, either by crediting the securities accounts or by setting up a valuation reserve. It is not so important to record the increases in value due to higher market prices, but even these should be noted, at least in an appended statement, on the balance sheet.

REVIEW

Do balance sheet figures always show true values?

What class of changes in values is recorded?

Explain why temporary fluctuations in values are not recorded.

Explain what is meant by the term "appreciation." When is it recorded in the books of a concern?

Discuss the practice of having appreciation offset depreciation.

CHAPTER XVI

MODERN BOOKS OF RECORD

1. *Classification of the accountant's functions.*— The accountant has two distinct functions in a modern business organization. In one capacity, he is charged with the duty of analyzing all the transactions and occurrences that in any way affect the financial status of the enterprise. This is the theoretical or analytical part of his work. He is also in charge of the office personnel engaged in recording the great mass of detail connected with business transactions. In this capacity, he is an executive directing an operating organization.

Up to this point in our discussion, we have been concerned primarily with the first of these functions. The fundamental principles of accounting analysis have been illustrated by the use of the simplest record forms. This method was used to keep the attention focused upon the broad questions of accounting analysis. It is essential to have the structure of an accounting system, as a whole, clearly in mind before one can discuss intelligently the application of specialized technique.

As an executive in charge of the office force, the accountant is concerned with the problem of devising

forms and methods of procedure for the prompt recording and classifying of all data. It is his function to keep the costs down to the lowest possible point. If the conventional journal and ledger, as described in Chapter V, were used for all accounting systems, the amount of labor required would greatly delay the preparation of the final statements and would add materially to the expense of operation. It is the purpose of this chapter and the following two chapters to consider this phase of the accountant's task.

2. *Volume of transactions requires division of bookkeeping labor.*—It would be impossible for one bookkeeper to record all of the transactions for even a moderate-size business. If the old form of journal and ledger were used, there would be no opportunity to subdivide the work. The introduction of a special sales journal and a cash book, as described in Chapter VI, affords some relief. If a separate bookkeeper were employed on each of the three books of original entry, it would be possible to record at least three times as many business transactions as would be possible if only one journal were used. This is only a suggestion of the possibilities of subdividing the bookkeeper's work.

As the volume of transactions increases, it becomes necessary to provide additional specialized books. Usually it is possible to arrange additional economies so that the unit cost of recording and posting transactions actually decreases as the volume increases. The principle of the division of labor, in other words,

applies to bookkeeping functions as well as to the production of goods in an industrial enterprise.

3. *Classification of transactions.*—The introduction of additional books of original entry should be based upon a classification of transactions. It is advisable to open a new form of journal for each type of transaction that recurs a number of times in the same form. The cash book is usually the first departure from the conventional journal, because the transactions involving the receipt and disbursement of cash constitute such a large proportion of the total. Next in importance, in most business concerns, are the sales transactions, followed closely by the purchase of materials and merchandise.

A simple form of cash book was illustrated in Chapter VI. This showed all of the cash receipts transactions on one side and disbursements on the other. A further subdivision often is made by separating the receipts and disbursements into separate books. In some cases, it is desirable to subdivide each of these books further, so that certain types of cash transactions may be journalized separately.

This same subdivision of books can be applied to other classes of transactions. A classification of transactions should be prepared in which those that recur most frequently are placed at the head of the list, and those that occur less frequently at the end. Special books may be prepared for these groups in the order of their importance. There will always be some classes of transactions for which specialized

journals will not be economical. The conventional journal is maintained to accommodate such miscellaneous transactions.

4. *The use of special columns.*—The introduction of special columns in the books of original entry also serves to save time and expense. Transactions are classified, first, according to one of the accounts affected. Cash disbursements, for example, affect the credit side of the Cash account. There may be a number of transactions in this classification that affect the debit side of one account, such as salaries or office expenses. Considerable time in posting can be saved by listing the transactions affecting these accounts in special columns. The total of each special column may then be posted to the debit of the account affected, thus eliminating many posting operations.

The same principle can be applied to the sales book, purchase book, and other specialized journals. Special columns may be used to show the sales by departments or classes of goods sold. Similar columns in the purchase book would be used to classify the merchandise or materials purchased.

The chief advantage in the use of special columns comes from the saving in posting operations. If the columns are carefully selected, it is possible to post the bulk of the entries in the several journals in a very few operations. The possibilities of saving clerical work in this regard were indicated in the posting of the cash book and sales book in the exercise in Chap-

ter VI. There was hardly a sufficient number of transactions to warrant the use of special columns in that illustration, but it is not at all difficult to see the opportunities for eliminating posting operations. A further saving, resulting from the use of special columns, is obtained in the operation of controlling accounts, as explained in later sections of this chapter.

5. *Development of specialized ledgers.*—It has been assumed in the discussion so far that all of the accounts are kept in one ledger. In actual practice, it has been found necessary to subdivide the ledger for the same reasons that caused the introduction of specialized journals. If the number of accounts is large, difficulty is encountered in keeping the postings up to date, where only one ledger is used. It is possible for only one man to work on the ledger at a time and, if there are several different journals, the work of posting is bound to become congested.

The segregation of accounts into more than one ledger makes it possible for the posting of a number of the books of original entry to be carried on simultaneously. In a large office, where there are as many as a hundred clerks working on the books at the same time, the necessity for such an arrangement is obvious.

The subdivision of the ledger presents some especially difficult problems. It is absolutely essential to maintain some system of checking the accuracy of the entries in each separate ledger. This would not be an easy matter, if the ordinary trial balance

method were the only test of accuracy. It would be an endless task to locate clerical errors, if all of the accounts contained in a half-dozen ledgers were listed in one trial balance in detail. This difficulty has been overcome by the introduction of a technical device known as the controlling account.

6. *Development of the controlling account.*—The controlling account is maintained in the main ledger, and it represents the total of one class of accounts carried in a subsidiary ledger. The main ledger is always kept in balance. In other words, a trial balance may be taken directly from the main ledger accounts without reference to the specialized ledgers. It is necessary to maintain summary accounts containing totals of debit and credit entries, in other ledgers, in order to keep the main ledger in balance. This may seem at first glance to involve a duplication of entries. In a way this is true, but there is a net saving of time and expense in this procedure.

Whenever a group of ledger accounts is taken out of the general ledger and placed in a specialized ledger, a controlling account is opened to take its place. The account opened in the general ledger is called a *controlling account,* because it serves to "control" the account balances in the subsidiary ledger.

A trial balance taken from the general ledger accounts shows whether or not the accounts as a whole are in balance. The total of the account balances from the subsidiary ledger should be equal to the balance in the controlling account. If there should

be a difference, the error in all probability lies in the subsidiary ledger. It is necessary to locate the cause of such a discrepancy in order to bring the subsidiary ledger properly into balance.

7. *Accounts Receivable a controlling account.*— The controlling account device is used most extensively in connection with customers' accounts. It is not at all unusual for a concern to have dealings with several thousand customers, and it is necessary to keep an account with each one. If all of these accounts were kept in the general ledger, it would be difficult to subdivide the detail work of posting. Furthermore, it would be necessary to list every one of the customers' accounts in the trial balance. It is obvious that such an extensive list of individual accounts would destroy the effectiveness of the trial balance as a basis for the preparation of the financial statements. It is much better, for statement purposes, to put the amount due from all customers under one title.

A separate ledger is opened in which all of the individual customers' accounts are kept. This is called the customers' ledger. An account is opened in the general ledger, entitled "Accounts Receivable." The total of the charges against the customers' accounts taken from the various books of original entry is entered on the debit side of the Accounts Receivable account. At the same time, entries are made on the debit side of each individual customer's account in the customers' ledger.

In a similar manner, the total of the credits to customers' accounts from the various books is posted to the credit side of Accounts Receivable, and the separate items are entered on the credit side of the individual customers' accounts in the customers' ledger. The general ledger account, therefore, always shows the summary of transactions with all customers, while the subsidiary ledger shows the transactions with each individual customer.

In the case of an organization that deals with many thousands of customers, it is clear that the use of a single subsidiary ledger and controlling account would save considerable time in the handling of accounting records. However, this saving can be greatly increased by a subdivision of the customers' accounts into sections, with a controlling account for each section. This subdivision is made alphabetically, and each section will contain accounts of customers whose surname begins with the letter of the alphabet assigned to that section.

The use of the controlling account and subsidiary ledger for customers' accounts goes hand in hand with the specialized form of sales journal mentioned earlier in this chapter. In ruling this type of sales journal, illustrated on page 268, there are the usual columns for date, name of customer, explanation of item, and ledger folio, and a certain number of money columns. The first money column is for the total amount of the sale, and the monthly total of this column is posted to the debit of the controlling ac-

A FORM OF SPECIALIZED SALES JOURNAL

Date	Name of Customer	Explanation	L. F.	Amount	Sales	Sales	Sales	Sales

count, and the individual items are posted to the customers' accounts. The remaining money columns contain the various classifications of sales, and the monthly totals of these columns are posted to the credit of their respective accounts.

When using a specialized sales journal of this type, it is common practice to enter only charge sales. The cash sales are entered on the "Cash Receipts" side of cash book, and the credit to the sales accounts is made from this record.

8. *Creditors' controlling account.*—It is usually convenient to keep a separate ledger for the creditors' accounts similar to the customers' ledger. In this case, the general ledger controlling account is entitled "Accounts Payable." The total of the amounts purchased on account is posted to the credit of this account from the purchase book or journal, and the individual accounts are credited in the subsidiary ledger. The debits to the controlling account are taken from the disbursement side of the cash book, in total, or from the journal, as the case may be. The Accounts Payable account, therefore, is a controlling account for the creditors' ledger.

If an organization is large enough to make the use of the creditors' controlling account profitable, a specialized form of purchase journal also can be used to advantage. In form, the purchase journal is similar to the sales journal illustrated on page 268. In the amount column, the total of the invoice is entered, and the remaining money columns are for

the various classes of items purchased. It might be mentioned here that, in actual practice, instead of placing the credit column on the extreme right of the page, it is often the first column. This is done to make individual postings to creditors' accounts easier, and to minimize the possibility for clerical errors. When the purchase journal has fifteen or twenty columns, and the total column is placed at the extreme right, it is a simple matter to take an amount from the wrong line and post it to the creditor's account.

One of the significant features of the two controlling accounts described is the fact that they provide a means of obtaining summarized information from the general ledger account and detailed data from the subsidiary ledger. This is one of the chief advantages of controlling accounts. The executive is interested chiefly in the total amount of indebtedness on open book accounts and in the total amount owed to the concern. He is not concerned about the amount due from John Jones, or the specific amount of the invoice of the Brown Company, when he analyzes the financial statements. The detailed information is of importance for other purposes, however, and is made available in the accounts of the subsidiary ledgers.

9. *Controlling accounts and special columnar journals.*—If the conventional form of journal were used, the procedure described above would require a duplicate posting of every item, one to the controlling

account and one to the individual account. Instead of saving time and expense, this would prove more costly than the plan of carrying all accounts in one ledger. The introduction of special journals, however, and the provision for special columns within these books, have made the controlling account the important factor in accounting that it is today.

If a special column is provided in the cash disbursements journal for debits to creditors' accounts, one posting of the total charges for the month is sufficient, so far as the controlling account is concerned. The separate individual accounts in the creditors' ledger may be charged directly from the detailed list of debits in the special column. In this way, there are individual postings in the subsidiary ledger for each transaction, and one posting to the controlling account for all of the transactions, in a lump sum.

The development of the controlling account has taken place concurrently with the extension of the use of special columns in books of original entry. In fact, the controlling account device, as a means of simplifying bookkeeping operations, is largely dependent upon a well-arranged system of special columnar journals.

No matter how elaborate the system of specialized journals may be, however, there will always be some transactions that must be entered in the general journal. In all such cases, duplicate individual posting of these items must be made. The number of such transactions will be small, but it is necessary for

the accountant to realize that, whenever he has made a posting to an individual's account, he must make a similar posting to the corresponding controlling account.

10. *Proof of controlling accounts.*—On the dates that the trial balance is prepared from the general ledger, the subsidiary ledgers should be tested for accuracy. This is done by drawing off a list of the balances in the individual accounts in the subsidiary ledger and comparing the total with the balance in the controlling account. If there is a difference, it must be traced through the books of original entry in much the same way as errors in a trial balance are checked.

It may be assumed that the subsidiary ledger balance is correct if its trial balance agrees with the balance in the controlling account. If there is a discrepancy, then it is almost certain to have come about through some inaccuracy in posting to the individual accounts. In the case of either customers' or creditors' accounts, it is essential that an error of the slightest possible amount be located. This can be done only by checking in detail all of the individual postings.

11. *Other types of controlling accounts.*—The principle of the controlling account was illustrated in connection with customers' and creditors' accounts, because these are the types most generally found in practice. There are a great many other ways in which this device may be used to advantage. Manufacturing concerns, for example, sometimes

use a controlling account for factory expenses, together with a factory ledger in which the detailed cost accounts are kept. It is possible, by this method, to keep a very extensive system of records to show the cost of manufacturing its various products and have, at the same time, only one account in the general ledger to cover the expenses incurred in the plant.

The system of controlling accounts is also used by organizations that maintain branch plants or offices. A general ledger account is kept for each branch, against which are charged all cash advances and other costs. Remittances and other credits from the outlying offices are entered in the same account. The subsidiary ledgers at the branch offices contain all of the details pertaining to operations.

Perhaps the most elaborate system of controlling accounts is used in railroad accounting. Practically every account in the general ledger of a railroad is a controlling account. Subsidiary ledgers are kept for each class of fixed assets, such as road, buildings and equipment, and for the revenue and expense accounts. The Cash account in the general ledger also controls the treasurer's ledger, which contains accounts with all of the banks in which deposits are kept. Each one of the subsidiary ledgers may, in turn, contain several controlling accounts for further subdivisions of the main accounts.

There is no limit to the possibilities of applying the principle of controlling accounts. They are of

service in any situation where summary information is desired for one purpose, and details for another. One of the most interesting phases of the accountant's work consists in devising methods of control through the application of this principle.

12. *Advantages of controlling accounts.*—There are many advantages in the use of controlling accounts. The chief ones may be summarized as follows:

(a) They afford an opportunity for a further division of labor in the accounting office.
(b) They make it possible to use less costly help on certain types of bookkeeping work, especially in posting entries to the subsidiary ledgers.
(c) There is a saving in time in making records and they insure promptness in the preparation of the financial statements.
(d) It is possible through their use to expand the records so that greater detail is available for other purposes than the financial statements.
(e) They afford a more convenient method of proving the accuracy of the records, since the amount of detail involved is subdivided and separate proof is possible for each subdivision.

Where the number of accounts carried becomes very large, as is the case with many organizations today, each controlling account may be further subdivided. In this way there is a veritable pyramid of accounts, starting at the base with a huge number of details, which are ultimately merged at the top into relatively few accounts that are used in preparing the financial statements.

13. *The petty cash fund.*—It is the practice of most business concerns to deposit daily in a bank all cash and checks received, and to make all payments by check. It is inconvenient, however, to draw separate checks to cover such small expenses as postage, telegrams, car fare, etc. In order to eliminate this difficulty, a special form of the controlling account device is used.

A small fund of cash, say $100, is turned over to a cashier who is responsible for such payments. An entry is made in the cash book debiting an account called "Petty Cash Fund" or "Imprest Cash Fund." This is an asset account that remains permanently on the books as long as the system is used.

The cashier puts the money in a cash drawer and makes the necessary small payments as occasions arise. He keeps a record of all payments and, at certain intervals, when the fund is low, turns in a report of the payments made and secures a check to bring the fund up to the original amount, $100 in this case. Sometimes the cashier is required to submit receipted vouchers for all payments made, but this is not essential to the operation of the system.

The Petty Cash Fund account is a controlling account, although no provision is made for credits. The debit balance is always equal to the original amount set aside for small payments. This amount is accounted for, either in the form of cash in the till or in the record of payments that have been made. The expense accounts affected by the payments are

charged in the cash book entry when the fund is replenished.

14. *Summary.*—The specialized books and methods described in this chapter are typical of those found in use in the average business office today. They may be indefinitely expanded and altered, subject, of course, to the limitations of the fundamental principles of the double entry system of keeping records. There are numerous adaptations of these forms which are especially fitted to the particular needs of individual organizations. Some of the more intricate forms are discussed in Chapter XVIII. Others, which often serve a useful purpose in many lines of business, cannot be discussed without introducing a great amount of technical illustrative material.

REVIEW

Show how the introduction of specialized journals aids in the division of bookkeeping labor.

What are the chief advantages in the use of special columns in books of original entry?

Explain how controlling accounts are used to save bookkeeping work.

Give an illustration of the use of controlling accounts in connection with other items than customers' and creditors' accounts.

Explain what is meant by the "imprest method" of making petty cash payments.

CHAPTER XVII

SPECIALIZED RECORDS

1. *Accounting forms adapted to needs of individual business.*—There are certain peculiarities about every business that require special consideration in the accounting records. It is impossible to set forth any one system of records that will meet the needs of every enterprise, or even to standardize the forms used in any one line of business. Every business man has a notion that his way of doing things is entirely different from that of others. This is undoubtedly an extreme view of the situation, but it has some basis in fact. In other words, there is a certain element of individuality in the conduct of business.

These differences are expressed in accounting by adapting the forms and records to the peculiar conditions of the specific enterprise. This does not mean that accounting principles differ in any way in their application to individual cases. The principles of accounting are fundamental and have the same meaning and significance to all types and forms of business organization. It is merely the methods used to gather the data and to prepare the statements that are subject to variation.

In the preceding chapter, we considered in a general way certain modifications of the journalizing and posting methods that have been adopted by most modern business concerns. It will be of interest to examine still further some of the variations that have been made in the application of these forms to specific cases. The illustrations that will be given in this connection may not be directly applicable to any organization with which the reader is familiar, but they should be suggestive of helpful ideas in adapting or originating proper records to meet other conditions.

2. *Special journal forms.*—In all of the illustrations given in earlier chapters, one conventional form of journal has been retained in which original entries are made for transactions that cannot be classified in one of the specialized journals. There are cases in which the special column device might well be applied to the general journal. Sometimes, for example, a business finds it necessary to make a number of adjustments in the customers' and creditors' accounts. The conventional general journal contains only one debit and one credit column, making it necessary to make duplicate postings for such transactions.

It is possible to save a great many postings by introducing additional columns for both the customers' and creditors' accounts. This may be done by placing all of the debit columns on the left side of the explanation column and the credit columns on

the right side. The customers' and creditors' columns may be posted in total to the appropriate controlling accounts, thus eliminating the duplicate postings that would be required from the conventional journal.

3. *The special column journal.*—The illustration on page 280 shows a form of journal with special debit and credit columns for customers' and creditors' accounts. The first entry in this journal shows that John Jones, a customer, settled an open book account by giving his promissory note. The Notes Receivable account, therefore, is debited in the general ledger column, and the individual account of John Jones is credited by an entry in the customers' ledger column.

In the second entry, a record is made of a promissory note given to R. Roe, a creditor. This is somewhat similar to the first entry, except that in this case the debit is made to R. Roe in the creditors' ledger column and the credit to Notes Payable is made in the general ledger column.

The third entry shows a change in a personal account from the customers' ledger to the creditors' ledger. This would occur in case the firm had both sales and purchase transactions with F. Flynn. In this illustration, the balance of Mr. Flynn's account in the creditors' ledger is being used to offset a purchase of $1,800 that has been carried as a debit to his account in the customers' ledger.

The last entry shows that the account of Paul

A FORM OF COLUMNAR JOURNAL

Customers	Creditors	General Ledger	L. F.		L. F.	General Ledger	Creditors	Customers
				March 1, 19—.				
		$4,000 00	7	Notes Receivable				
				John Jones	26			$4,000 00
				To record the receipt of 60-day note, dated today.				
				2.				
	$1,500 00		42	R. Roe				
				Notes Payable	18	$1,500 00		
				For our note due in 60 days.				
				2.				
	1,800 00		48	F. Flynn				
				F. Flynn	22			1,800 00
				To transfer.				
				15.				
		500 00	53	Reserve for Uncollectible Accounts				
				Paul Macey	23			500 00
				To write off account uncollectible.				
				31.				
	$3,300 00	3,300 00	16	Creditors' Controlling Account				$6,300 00
				Customers' Controlling Account	5	6,300 00		
		$7,800 00				$7,800 00		

A FORM OF STATISTICAL SALES JOURNAL

Date		Name of Account	L. F.	Amount	Dep't. 1	Dep't. 2	House Sales	Smith	Jones	Baker
19—.										
July	1	F. Thompson	29	$1,500 00	$ 700 00	$ 800 00	$1,500 00			
	5	E. Kayser	86	765 00		765 00		$765 00		
	7	C. Decker	16	350 00	350 00				$350 00	
	29	E. Vogel	80	1,760 00	1,760 00					$1,760 00
				$4,375 00	$2,810 00	$1,565 00	$1,500 00	$765 00	$350 00	$1,760 00
		Commission 10%						$76 50	$35 00	$176 00

Macey is worthless and is being charged against the reserve for uncollectible accounts.

The items that appear in the general ledger columns are posted separately, as would be the case when using a two-column journal. The totals of the customers' and creditors' columns are transferred to the general ledger columns, as shown in the illustration, and posted to the ledger; or they may be posted direct to the ledger, without this transfer.

4. *Sales journal used for statistical records.*—The sales journal of a relatively small enterprise may be used as a book of statistical records as well as a posting medium, merely by adding special columns. A form of this type is shown in the illustration on page 281.

It will be observed that, in addition to a classification of sales by departments, this firm provides several columns in which to list the sales by individual salesmen. The first three money columns are used for the regular accounting records. The total of the first column is charged to Accounts Receivable, the total of the second column is credited to Sales Department No. 1, and the total of the third column is credited to Sales Department No. 2.

Then a classification of sales according to individual salesmen follows, which is a convenient means of computing commissions. It also aids the manager in securing information as to the productive efficiency of the several salesmen. A classification of this sort can be extended to include a distribution of sales by

districts, if so desired. If the number of columns is increased greatly, however, the book becomes unwieldy, and a cause of additional expense instead of a means of simplifying the records.

5. *The voucher record.*—The voucher record, as used by a number of corporations, is a combination purchase book and creditors' ledger. It is adaptable to a business that makes a practice of paying all bills incurred for the purchase of materials, merchandise, and other expense items on certain definite dates, and in full, i.e., without making payments on account.

At the time a purchase is made, a voucher form is made out giving authority to the treasurer to make the payment on a certain date. This voucher is kept in a special file until the date for payment, after which it is transferred to a "paid voucher" file, and filed numerically. There is no need for a creditors' ledger when this system is used, because the unpaid voucher file contains all of the information needed concerning the details of accounts payable. Sometimes, the vouchers are prepared in duplicate and the copy filed alphabetically, to show business done with each creditor, and for other reasons.

The successful operation of a voucher system depends upon the general office routine. Certain officers of a corporation are authorized to place orders for materials or merchandise. A special form of purchase order must be filled out and signed by the proper official for each order. This constitutes

the authorization to incur a specific form of indebtedness. When the invoice for the goods is received, the voucher form is prepared, showing that the debt has been properly authorized. The next step is taken by the treasurer who simply follows the instructions on the voucher. Thus, there is a continuous series of paper records for each transaction from the time an order is placed until the bill is paid. The voucher record is simply one step in the office routine.

6. *Form of voucher register.*—A blank form of a typical voucher register page is shown in the illustration on page 285. This record is used very much like a purchase book. The vouchers are made up from the purchase invoices, numbered, and entered in this book in chronological order, i.e., according to the date of issue. The name and address of the creditor is entered next, and the amount of the bill is placed in the first money column. The total of this column is posted to the credit of the creditors' controlling account in the general ledger.

The series of money columns under the heading "Distribution" are used for the debit entries to the accounts affected by the purchases. These are posted in total, with the exception of the "Other Ledger Accounts" column that contains the entries in accounts for which there are no special columns.

That part of the page to the left of the triple rule is a complete purchase journal. The section of the page to the right is used for data covering the settlement of the bills. It is a matter of choice as to

VOUCHER REGISTER

Voucher		Name of Creditor	Address	File No.	Terms	Amount	Distribution									Settlements										
Date of Issue	No.						* A	B	C	D	E	F	Other Ledger Accounts Name	Folio	Am't	Date	Number Note	Number Check	Cash	Notes Payable	Disc't	Allowance	Returns A	Returns B	Returns Other Accounts Account	Returns Other Accounts Full Amount

* Letters refer to classes of Mdse.

just how complete the data in this section of the record will be. In the form illustrated on page 285, considerable information is provided for. In contrast, the "settlements" section may be reduced merely to the date of payment and the check number. No postings are made for the entries on this side of the register. The debit entries to the creditors' controlling account are made for the cash book in the usual manner.

As was stated above, a subsidiary ledger for the creditors' accounts is not maintained under this system. It is a very simple matter to determine the particular accounts that have not yet been paid, by looking at the column on the right-hand side of the register. There will be entries on the lines opposite the vouchers that have been paid. If no data appear in the section opposite a voucher entry, it is evident that the voucher is still unpaid. The balance in the general ledger account, "Accounts Payable," at the end of an accounting period, must be reconciled with the unpaid vouchers in the register.

7. *Purchase and sales returns and allowances.*— The treatment of the accounting adjustments arising from the return of defective goods and other allowances is a matter of significance in certain lines of business. Ordinarily, the entries covering both the sales and purchase returns and allowances are made in the journal. In some organizations, however, the number of such transactions is so large that it becomes desirable to use a specialized journal.

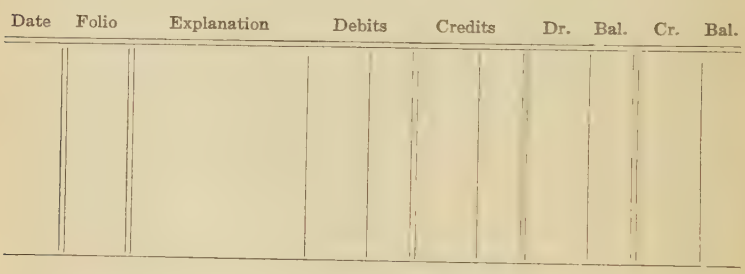
In any business that deals in goods having a distinct style factor, the returns and allowances run into large amounts. It is desirable to keep a classified record of all adjustments with customers and creditors. A sales returns and allowances book would be just the opposite in arrangement from the sales book. The total of the items entered in the book would be credited to the customers' controlling account in the general ledger. The return of goods by a customer constitutes a cancellation of the original sale transaction. It would appear proper, therefore, to debit the Sales account with the amount of the returns and allowances. The total amount of such uncompleted sales transactions, however, should be made known to the executives of an enterprise so that they can undertake proper corrective measures. This is accomplished, with the expenditure of less clerical effort, by opening separate accounts for sales returns and allowances.

In the case of purchase returns and allowances, the same general methods are used. A special journal is used, in which to record the allowances made by the creditors of a firm. The column totals of this book would be posted to the debit side of the creditors' controlling account in the general ledger, and to the credit side of the appropriate purchase returns and allowances accounts.

8. *Special forms of ledger accounts.*—It is possible by a rearrangement of column rulings to simplify the ledger account so that it will yield in-

formation more readily than the conventional type of account. There is very little space on the standard account form for recording more than the debit and credit entries. Furthermore, it is necessary to make several computations in order to ascertain the balance at any time.

One of the most convenient arrangements of the ledger account form is the provision of special columns for the running balances as shown in the following illustration:



The debit and credit postings are made in the usual way, but the balance is computed after each entry and is carried to the appropriate balance column. By ruling the ledger accounts in this way, the taking of a trial balance is aided materially. It is possible to tell at a glance whether an account has a debit or credit balance, and the amount.

This arrangement also makes it possible to record some descriptive material in the explanation column. In some types of business, it is desirable to have some of the data pertaining to the ledger entries recorded in the account, for future reference. A corporation

that handles investments, for example, would find it convenient to have some of the details concerning each item in the account with the financial data.

9. *Mortgage investment ledger.*—The need for additional space, in the accounts, for explanatory information is particularly pronounced in the ledgers of concerns dealing in mortgages. Savings Banks, insurance companies, and investment houses, for example, buy and sell mortgage notes on a great many pieces of property. The statistical information required for each mortgage is recorded on the reverse side of the ledger sheet. This includes such data as: the location of property, section number, ward number, block number, lot number, map number, valuation of land and improvements separately stated, date of last appraisal, name of obligors on the notes or bonds, a record of assignments, date and place where the mortgage was recorded, title policy, a record of the payment of taxes, rate of mortgage interest, etc.

This is all entered on one side of the ledger account sheet, for convenience in analyzing the history of transactions pertaining to each mortgage investment. On the other side of the sheet, the financial data are recorded. A convenient form of ruling for this purpose follows:

No. Loan to

Date	Reference	Principal			Interest taxes and other disbursements	
		Loaned	Paid	Balance	Advanced	Repaid

These accounts are maintained in a subsidiary ledger under the control of a general ledger account for mortgage investments. There are two debit columns, one for the amount loaned and one for temporary advances made for taxes, interest, etc. There are also two credit columns, one for payments of principal and one for the repayment of advances.

10. *Private accounts.*—There are cases in which it is considered important to keep strictly confidential certain information concerning the amount of profits earned, and to segregate this information for the exclusive use of one or more of the executives of a concern. It is impossible to withhold confidential data from the office force, if the accounting records are kept in the usual form. A device known as the *private ledger* has been developed to meet these needs. This ledger is kept either by one of the executives or by a confidential clerk.

The private ledger system can be devised in such a manner as to keep secret any particular type of information, such as the value of fixed assets, the relative interests of partners, the distribution of profits, etc. In order to accomplish this result, it is necessary to maintain a *private journal* as well as a private ledger. The entries in these records are made at regular intervals with data derived from the general books. The two sets of books are kept in balance through an adaptation of the controlling account principle.

It is necessary to keep all of the active accounts in

the general ledger. These include the Cash account, the controlling accounts for customers and creditors, and the general income and expense accounts. The less active accounts, such as those in which are recorded the value of land and buildings, investments not carried as stock in trade, reserves, partners' accounts, etc., may be kept in the private ledger.

If it is desired to keep the amount of net profit confidential, it is necessary to record the inventory in the private ledger. The inventory is one of the most important factors in determining the amount of profit. If the general bookkeeper has information concerning the value of the goods on hand at the beginning and end of an accounting period, as well as the purchase and sales data and the expense accounts, he can very easily determine the amount of net profit, if he so desires. It is essential, therefore, that some one of these facts be kept in the private ledger, if secrecy is desired.

11. *An illustration of private books.*—The actual operation of the private ledger system is of sufficient practical importance to warrant giving a rather complete illustration. We may assume, for example, that the firm of Doe & Roe commences business with the following assets and liabilities:

ASSETS

Land and Buildings	$40,000.00
Plant and Equipment	10,000.00
Cash	20,000.00
Merchandise Inventory	15,000.00
Total	$85,000.00

LIABILITIES	
Mortgage Payable	$15,000.00
J. Doe, Capital	40,000.00
R. Roe, Capital	30,000.00
Total	$85,000.00

The following will be the trial balances of both the private and the general ledgers at the beginning:

DOE & ROE
INITIAL TRIAL BALANCE—PRIVATE LEDGER

Name of Account	*Debits*	*Credits*
Land and Buildings	$40,000.00	
Plant and Equipment	10,000.00	
Merchandise Inventory	15,000.00	
Mortgage Payable		$15,000.00
J. Doe, Capital		40,000.00
R. Roe, Capital		30,000.00
General Ledger Account	20,000.00	
	$85,000.00	$85,000.00

DOE & ROE
INITIAL TRIAL BALANCE—GENERAL LEDGER

Name of account	*Debits*	*Credits*
Cash	$20,000.00	
Private Ledger Account		$20,000.00
	$20,000.00	$20,000.00

It is obvious that if the general ledger bookkeeper did not have access to the information contained in the private ledger, he could not ascertain the initial net worth of the firm, nor could he be aware of any of the details of the remaining assets and liabilities of the firm.

The usual income and expense accounts are maintained in the general ledger. At the end of the fiscal period, these accounts are closed to the private

ledger account instead of to the profit and loss account.

It will be observed that the Private Ledger account in the general ledger and the General Ledger account in the private ledger both show the same balance in dollars, but the balances are opposite in nature. Manifestly, this will always be so, when all of the posting has been fully completed at the end of any fiscal period.

12. *Closing the books.*—In order to illustrate the manner of closing the ledgers, let us assume that, at the end of the fiscal period, a trial balance of the general ledger of Doe & Roe discloses the following:

DOE & ROE
TRIAL BALANCE—GENERAL LEDGER

Name of Account	*Debits*	*Credits*
Cash	$ 14,500.00	
Notes Receivable	5,000.00	
Accounts Receivable	15,000.00	
Purchases	70,000.00	
Selling Expenses	4,000.00	
Administrative Expenses	6,500.00	
Accounts Payable		$ 30,000.00
Sales		65,000.00
Private Ledger Account		20,000.00
	$115,000.00	$115,000.00

The journal entries necessary to close the general ledger are as follows:

Private Ledger Account	$80,500.00	
Purchases		$70,000.00
Selling Expenses		4,000.00
Administrative Expenses		6,500.00
Sales	65,000.00	
Private Ledger Account		65,000.00

After posting the foregoing entries the trial balance of the general ledger will be as follows:

DOE & ROE
TRIAL BALANCE—GENERAL LEDGER

Name of Account	*Debits*	*Credits*
Cash	$14,500.00	
Accounts Receivable	15,000.00	
Notes Receivable	5,000.00	
Accounts Payable		$30,000.00
Private Ledger Account		4,500.00
	$34,500.00	$34,500.00

Up to this point there is no evidence as to the amount of the profits. It will be assumed that the partners themselves took the inventory of stock on hand, and that they also priced it and made the extensions, and that the amount of the same was $40,000. The closing entries of the private books were made, we will assume, by one of the partners:

Profit and Loss		$80,500.00	
Purchases	$70,000.00		
Selling Expenses	4,000.00		
Administrative Expenses	6,500.00		
General Ledger Account			$80,500.00
General Ledger Account		65,000.00	
Profit and Loss			65,000.00
For sales			
Mdse. Inventory (new)		40,000.00	
Mdse. Inventory (old)			40,000.00
Mdse. Inventory (old)		25,000.00	
Profit and Loss			25,000.00

If, at this point, the ledger accounts in the private ledger are examined, they will reveal the following condition on page 295 (using skeleton accounts).

Land and Buildings	
$40,000.00	

Plant and Equipment	
$10,000.00	

General Ledger Account	
$20,000.00	$80,500.00
65,000.00	

Merchandise Inventory	
$15,000.00	$40,000.00
25,000.00	
$40,000.00	$40,000.00
$40,000.00	

Mortgage Payable	
	$15,000.00

Profit and Loss	
$80,500.00	$65,000.00
	25,000.00

J. Doe, Capital	
	$40,000.00

R. Roe, Capital	
	$30,000.00

It will be noted that there is a credit excess in the Profit and Loss account, which means that a profit equivalent to the amount of the credit excess has been realized. This amount, $9,500, is distributed equally to the two partners by the following journal entry:

Profit and Loss	$9,500.00	
J. Doe, Capital		$4,750.00
R. Roe, Capital		4,750.00

A trial balance of the private ledger at this point will be as follows:

DOE & ROE
TRIAL BALANCE—PRIVATE LEDGER

Name of Account	*Debits*	*Credits*
Land and Buildings	$40,000.00	
Plant and Equipment	10,000.00	
Inventory	40,000.00	
Mortgage Payable		$15,000.00
J. Doe, Capital		44,750.00
R. Roe, Capital		34,750.00
General Ledger Account	4,500.00	
	$94,500.00	$94,500.00

The reader will observe that the general ledger transactions furnish no clue to the amount of the profits and also that the private ledger and the general ledger accounts are the balancing accounts in each ledger.

13. *Entries to private ledger accounts.*—It may happen that, during the period, transactions will occur that affect private ledger accounts. For example, assume that additional plant and equipment were procured for cash amounting to $5,000. In the cash book on the payment side, the account to be debited would be "Private Ledger." This item would be taken up in the private journal by the following entry:

Plant and Equipment	$5,000.00	
General Ledger Account		$5,000.00

14. *Preparation of financial statements.*—A private ledger account is a type of controlling account. That is to say, the balance in the Private Ledger account in the general books controls the private ledger accounts, and the balance in the General Ledger account in the private books controls all the accounts in the general ledger. Consequently, in order to prepare financial statements of an organization where private books are used, it is necessary to take one trial balance of the general books and another of the private books, and then to make up the financial statement from the composite result shown by these two trial balances.

This does not mean that the two trial balances

must be converted into one, but rather that all the accounts in each trial balance must be carried into the financial statement, with the exception of the two controlling accounts, "Private Ledger" and "General Ledger." Since one of these accounts shows a debit balance and the other shows a credit balance identical in amount, we can offset one against the other and thus leave them entirely out of consideration in preparing the statements.

15. *Other adaptations of accounting records.*—A sufficient number of illustrations has been given in this chapter to demonstrate the possibilities for adapting the conventional accounting records to meet the needs of business in unusual situations. Practically every business has some particular type of problem that can be solved only by a specialized accounting device. It would be impossible to describe even a considerable number of those that are now in use, and new ones are being evolved every day.

There is one aspect of this situation that should be emphasized, however, and that is the fact that the fundamental steps in the accounting process are always the same, no matter what adjustments may be made in the forms of the records. Provision is always made for the classification of transactions into debit and credit elements, the posting process is accomplished in some manner, a trial balance is prepared, the accounts are closed, and the formal accounting statements are prepared.

It is clear that the old forms of journal and ledger

are giving way to these newer specialized records. Not only are the forms of the books being changed, but entirely new labor-saving devices are being introduced. Some of these will be described in the next chapter.

REVIEW

Illustrate the circumstances under which it is desirable to add special columns in the journal.

Explain what is meant by the voucher system of making payments.

In what types of business would special journals be required to record purchase and sales returns?

State the advantages of a ledger form in which the balances are shown after each entry.

Explain how the books are closed when a private ledger is used.

CHAPTER XVIII

LABOR-SAVING DEVICES AND MACHINES

1. *Development of labor-saving methods.*—The point has been stressed in earlier chapters of this Text that the accounting processes and systems should be fitted to the individual needs of an organization. Accurate information, promptly prepared from the books of record, is expected from a good system and this may be obtained in several different ways. Books may be added or omitted, forms may be varied, ledgers and journals may be combined in a single form, or may be split up into subsidiary units, so long as the resulting system serves its purpose and presents the necessary information. The ideal accounting system is one in which the maximum of information is obtained with the minimum of expense.

Accounting practice has been developing rapidly during the past few years. It was not so very long ago that business concerns used the old conventional journals and ledgers. Loose-leaf records and card ledgers were first introduced in the early part of the twentieth century, yet, today, they are considered practically standard practice in most accounting systems. At the present time, various types of machines are being introduced as supplementary aids in speed-

ing up the accounting procedure. These will soon become standard equipment as still newer methods are being devised.

2. *Loose-leaf records.*—Not many years ago, all bookkeeping records were kept in bound books, as these were about the only type of equipment available. It was considered to be a radical procedure for a concern to introduce loose-leaf books for the principal accounting records. There has been so much progress, however, that practically every office of any size includes this type of equipment in its system to some extent.

The particular feature that has brought loose-leaf records into general use is their flexibility. Organizations that employ several bookkeepers are able to split up this form of record in such a way that several stages of the work can be carried on simultaneously. Furthermore, the loose-leaf ledger eliminates many of the vexing questions of paging, the carrying forward of balances, the dropping of inactive accounts, and the introduction of new accounts. It is necessary only to open the ledger at the proper place and insert a new sheet to introduce a new account in the desired location, or to carry forward an old account.

It is possible to combine several different books under one binder simply by inserting division tabs or by using various colored sheets to distinguish one section from another. In some organizations, for example, the customers' and creditors' ledgers are

kept in the same binder with the general ledger, even though the controlling accounts are maintained in the general ledger to cover the balances in the subsidiary ledger.

3. *Card ledgers.*—A further adaptation of the loose-leaf device is found in the card ledger. Cards may be kept in filing cabinets in such a way as to make the records still more flexible than the loose-leaf books. This is particularly convenient in keeping the customers' ledger. If frequent reference is made to the accounts for correspondence purposes, it is a simple matter to extract the cards from the files. The transfer of cards, however, involves the danger of having the accounts lost or of being out of the files at a time when they are needed for the posting of additional entries.

The use of the card ledger system is particularly well adapted to the use of the tabulating machine, which is described in a later section of this chapter. It is possible to sort the cards rapidly for the purpose of tabulating different classes of data that may be desired.

4. *Objections to the use of the loose-leaf or card records.*—When loose-leaf records were first introduced, there was some doubt as to their security and legality as evidence in case of law suits. The fact that the leaves were loose and could be easily removed appeared to increase the risk of loss and theft. A dishonest employee could substitute a new sheet and thus cover up a defalcation.

Experience has shown, however, that these objections are not well founded. It is not a simple matter to alter one record without affecting the entries in several other books. The bookkeeping work is usually divided among several employees in such a way that it would be necessary for more than one to be implicated in any act involving a distortion of the accounts. Systems of internal check have been developed to such an extent that an error in the work of one member of the organization is immediately made known to others.

The legality of loose-leaf records as evidence in court has also been clearly recognized. There have been a number of court decisions to the effect that loose-leaf records—both ledgers and books of original entry—are as good evidence as bound books. The mere fact that a book has a permanent binding is not a guarantee against fraudulent entries. If care has not been taken to arrange the bookkeeping work in such a way as to make it extremely difficult to alter records without being detected, any system is open to objection. On the other hand, if proper safeguards have been placed upon the routine of office procedure, the entries in one form of book are just as authentic as those in another.

5. *System of internal check.*—In any large office, it is impossible for an executive to examine in detail the work of every office employee. The volume of transactions that must be recorded is so large that it is inadvisable even to attempt a thorough audit of

all entries. It is essential, therefore, to provide some scheme that works automatically for checking the work of the several bookkeepers. This is accomplished by the introduction of systems of internal check.

The particular methods to be used in establishing a system of internal check depend upon the conditions in an organization. It is essential to distribute the work in such a way that the work of one person always serves as a check upon that of another. The authorization for the incurring of liabilities, for example, should come from one person, the recording of the indebtedness by another, and the payment of the obligation by a third party. Again the custody of certain assets should be vested in one person while the book records of the same assets are placed in charge of another. Another method of internal check is the periodic rotation of clerks doing similar work.

Most systems of internal check center around the cash and inventories, as these assets are more readily subject to misappropriation than are others. There are other items, such as securities owned, notes receivable, and customers' accounts, that can be manipulated to cover up shortages. It is possible to prevent such occurrences by dividing the authority for authorization of transactions and the recording of the entries.

6. *Checking inaccuracies.*—As a result of the introduction of labor-saving devices, the work of the bookkeeper becomes almost automatic. It practically

introduces the system of the production line in the office so that each operative performs some one small task over and over again. The monotony of the work and the interruptions that frequently occur in the course of the day's work are likely to lead to errors in operation. Clerical errors of this sort become evident either within the system of internal check, or in the trial balance.

A complete check may be made of the work when such inaccuracies arise. This can be done either by the bookkeeper whose accounts are in error or by some other person. It serves as a double check to have somebody else do the checking, because everyone has a natural tendency to repeat an operation in exactly the same manner in which it was first performed. When more than one bookkeeper is employed, arrangements should be made for one to check the work of another.

7. *A self-proving trial balance.*—Some form of checking is essential to accurate accounting even though the trial balance proves. A number of errors may occur without, in any way, affecting the equilibrium of the trial balance. It is possible to arrange a form of checking that combines a proof of the trial balance with a proof of the accuracy of the postings of the accounts. Some organizations have used this system with such success that they are able to locate any trial balance differences without any difficulty and at the same time are assured of the accuracy of postings to individual accounts.

By this method, the ledgers are posted in the usual manner, but all of the accounts in the general ledger are constructed in skeleton form on separate sheets. That is, only the debit and credit amounts are entered, without the supporting data showing the cause of the entries. It is possible to group as many as one hundred accounts on a single sheet and to post the items very quickly. On another sheet the trial balance is prepared as illustrated below:

TRIAL BALANCE

_____COMPANY

_____19__

Accounts	Balance 1st of Month		Monthly Debits or Credits		Balance End of Month	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.

8. *Preparing the trial balance.*—The first column in the form shown above contains the list of accounts in the general ledger. The balances at the

beginning of the month are entered in the first two money columns. At the end of the month, the debits and credits from the skeleton ledger are entered in the second pair of columns. The trial balance at the end of the month is then obtained by adding the items in the second pair of columns to the appropriate balances in the first two columns.

If, for example, the balance in the Cash account at the beginning of the month was $10,000, and the transactions for the month resulted in debits of $14,000 and credits of $12,000, the balance at the end of the month would be entered as a debit of $12,000. If the work has been done correctly, the totals in the last two columns will be equal.

If the last two columns do not balance, the checking may be done against the ledger accounts. The entries in the trial balance column are taken from the skeleton ledger pages, but the books of original entry have also been posted to the general ledger. A comparison of the ledger balances with the trial balance figures will show where the discrepancy lies.

9. *Verification of balances.*—In order to verify the ledger accounts, it is usually sufficient to check the balances as shown in the self-proving trial balance against the balances in the accounts. There is very little chance that an error will be made in the trial balance by one clerk and repeated by another in posting to the ledger. By checking each individual account and investigating any discrepancy between the ledger balances and the trial balance, all errors

in recording the month's transactions will be located, unless one of the books of original entry is out of balance. If this checking does not locate the error, it is necessary to re-examine the books of original entry.

In a large enterprise this method of taking the trial balance has many advantages. It practically gives two paths to the same goal. If both routes do not yield the same results, the error is readily located. By having both records taken from the same books of original entry, a ready means of checking is afforded.

10. *Office appliances in accounting work.*—Various types of appliances and machines have been introduced into accounting practice. Many machines have been designed to relieve the bookkeeper of routine work. In this respect, the development of office methods has followed the introduction of mass methods in the factory. Every time a particular operation becomes completely standardized, somebody produces an appliance that will do the work more cheaply and effectively. There is a constant march of machinery to take the place of human labor.

It would be impossible to describe in detail all of the machines that are at present being used in accounting practice. There are literally hundreds of patented devices that have applications to various phases of accounting work. Some concerns have so completely mechanized their office work that none of the standard forms of records is retained. It

takes time to develop a system that utilizes all of the labor-saving aids, however, and most offices are using both the older methods and the machine methods. It will be of interest to examine some of the devices in order to see how they may be applied.

11. *Bookkeeping machines.*—Adding machines have been in use for many years. They were used originally, however, for the purpose of saving time in the routine process of securing column totals of figures that had been entered in books by hand. In recent years, however, the companies that manufacture adding machines have introduced features that make them adaptable to actual bookkeeping operations. It is possible on some bookkeeping machines to render customers' statements, to make original journal entries, and to post ledger accounts, all in combined operations.

There are two general types of bookkeeping machines. One is a development of the old adding machine. Additional totalizers, special keys with reference symbols and, in some cases, typewriter attachments have been introduced, the result being practically a combined adding machine and typewriter. The other type is an outgrowth of the typewriter. In this case, certain adding and listing devices have been attached to the typewriter, so that the operator can use the machine for both purposes.

All of the companies that manufacture machines have made careful studies of their possible uses in office work. The competition in the trade is very

keen and each company attempts to discover special adaptations of its product that others do not have. It would be impossible here to mention the fine points of the different machines, or to comment upon the superior features of any one machine over its competitors. The salesmen of each company can be depended upon to demonstrate the outstanding features of the machines that they sell. We shall only point out some of the ways in which bookkeeping machines may be used to advantage in saving labor in the office.

12. *Posting and billing by machine.*—Bookkeeping machines are usually introduced just to simplify the posting of customers' accounts. Any concern that deals with a great many customers finds that the routine work of recording sales transactions and sending out bills constitutes the largest part of its bookkeeping work. A large retail store has several thousand credit customers who make numerous small purchases during the month. It has become the custom to send each one an itemized statement at the end of the month.

Under the older methods of keeping records, it would be necessary to make postings from books of original entry to the customers' ledger. Then, to prepare the monthly bills, it would be necessary to copy the charges and credits from each customer's account. This always caused a congestion in the office the first few days of every month. The size of the office force depended upon the number of

clerks needed to copy the accounts for billing purposes. These clerks had little to do except at billing time.

The installation of a bookkeeping machine does away with the peak load and at the same time assures greater accuracy in billing. By this method, the accounts are posted and the bills are prepared at the same time from the original sales data slips. At the end of each day's business, the sales invoices or slips are sorted according to customers' names. The machine is set so that totals may be computed for individual customers and accumulated totals for all sales may be obtained simultaneously.

The customers' accounts are kept on loose-leaf sheets arranged in alphabetical order. The posting clerk takes the sales slips for a customer, extracts his account from the ledger, makes the entries on the machine, and replaces the sheets in the ledger. These operations are repeated for each customer's account, in order, until all sales slips have been posted. The grand total in the machine shows the amount of sales for the day.

13. *Posting and billing combined.*—The billing feature may be combined with the posting by the use of carbon copies of the account. To employ this method, it is necessary to use a new ledger sheet for each month's transactions. Another method is to run the billing forms through the machine separately. When this method is followed, it is necessary to put the data from the sales slips into the machine twice,

once for the ledger account posting and once for the customers' bills. This can be done rapidly, however, and therefore does not materially increase the routine work. Some of the newer billing machines are so arranged that both the ledger account sheets and the billing forms can be placed in machines at the same time, side by side, and the entries made on both at the same time.

The figures on pages 312 and 313 show an illustration of the use of a bookkeeping machine for posting and billing.

14. *Bank bookkeeping machines.*—The depositors' accounts in a bank are somewhat similar to the customers' accounts in a retail store. It is particularly essential in bank bookkeeping, however, to have the transactions recorded as promptly as possible. The canceled checks and deposit slips are passed to the recording clerks from the tellers' windows several times a day. In most banks, they are run through the bookkeeping machine twice and by two different clerks. This is done to insure accuracy. One clerk makes the entries in the depositors' accounts and the other lists them on the statements that are mailed at the end of the month.

It is a simple matter to remove the depositors' statements from the files at the end of each month and to mail them, together with the canceled checks. The last balance on a depositor's statement is the opening balance on the next statement. It also represents the balance in the depositor's account.

Monthly Statement

THE JORDAN CO.
Chicago, Ill.

Simpson Clothing Co.
Three Rivers, Minn.

Amt. Pd.

$.....

Pay last amt. in this col.

	Old Bal.	Ref. No.	Date	Description	Chgs.	Cr.	New Bal.
			1929				
			Nov.	Bal. forward			$190.98
*	$190.98	149	3	Tuxedos	$164.25		355.23
*	355.23	165	12	Blue serges	75.60		
				Cheviots	153.46		584.29
*	584.29	174	15	Boys' Tweeds	46.81		631.10
*	631.10		21	Cash & Disc.		$190.98	440.12
*	440.12	192	21	Overalls	123.46		563.58

15. *Registering machines.*—Cash registers have been used in stores and offices for a great many years for the purpose of keeping a definite check on the receipt and disbursement of cash. In recent years, these devices have been developed into elaborate accounting machines. This has been accomplished by adding special keys and totalizers that may be used to record information on transactions other than those that merely involve cash.

The Jordan Co.
Chicago, Ill.

LEDGER ACCOUNT
Customer's Name
Address

Acct. w16
Simpson Clo. Co.
Three Rivers
Minn.

	Old Bal.	Ref. No.	Date	Description	Chgs.	Cr.	New Bal.
			1929 Nov.				
*	$190.98	149	3	Tuxedos	$164.25		$355.23
*	355.23	165	12	Blue serges	75.60		
				Cheviots	153.46		584.29
*	584.29	174	15	Boys' tweeds	46.81		631.10
*	631.10		21	Cash & Disc.		$190.98	440.12
*	440.12	192	21	Overalls	123.46		563.58

Some of these registers have special keys for sales on account and for the distribution of sales by departments. One of the largest of these machines, recently placed on the market, has such an array of keyboards that it is possible to keep practically a complete set of accounts without using any additional journals and ledgers. Registers of this type have been adapted to the needs of bank tellers. They are so arranged that the teller is able to record every transaction on the keyboard as it occurs. At the end of the day, it is only necessary to take the totals from the register in order to determine the balances he should have on hand. This enables him to compute his proof sheet in a very few minutes.

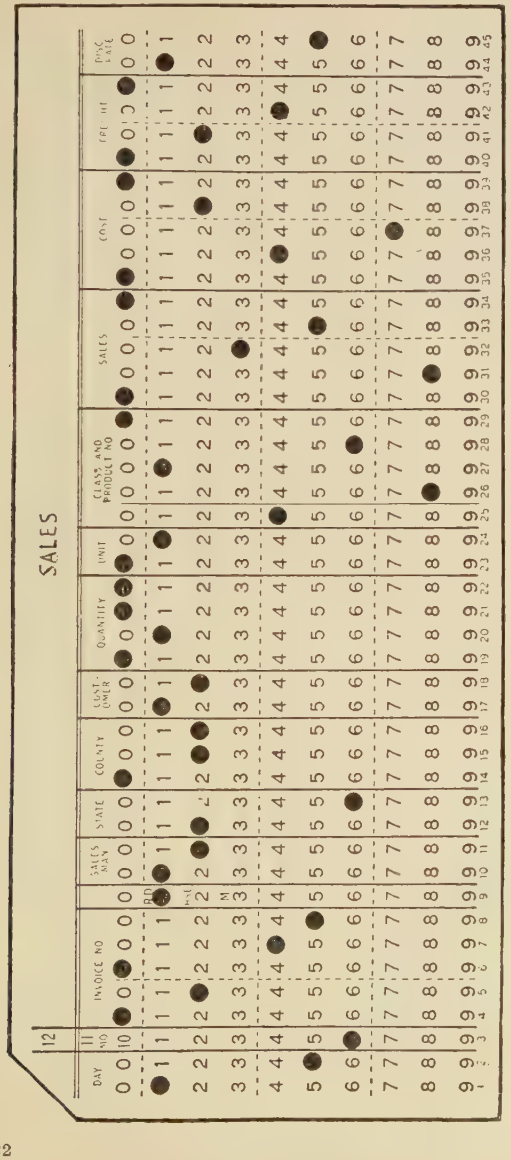
16. *Tabulating machines.*—Perhaps the most im-

portant recent development in labor-saving devices is the introduction of tabulating machines into accounting practice. These machines have been used in the past chiefly for statistical work. They have been used in the Bureau of the Census at Washington for a number of years. Insurance companies have also made use of tabulating machines in computing reserves and mortality rates.

The tabulating machine is operated and controlled by cards on which the data to be tabulated are entered by means of punched holes. The holes are punched in the control cards according to a prearranged code. It is possible to arrange the card in such a way as to accommodate several hundred combinations of figures. The form on page 315 shows an illustration of a card set up for the purpose of recording an analysis of sales data.

A separate card such as the one illustrated on the opposite page is punched for each invoice. There are fifteen classes of data provided for on the card, as follows:

(a) Day of the month	15
(b) Month of the year	6
(c) Invoice number	2045
(d) Order received from a road salesman	
(e) Salesman's number	12
(f) State	26
(g) County	22
(h) Customer's number	12
(i) Quantity of goods	100
(j) Unit	1
(k) Class of product 4, and number	8160


SALES
12
DAY
11
10
INVOICE NO
SALES SLIP
STATE
COUNTY
CUST. ORDER
QUANTITY
UNIT
CLASS AND PRODUCT NO
SALES
COST
GPT 101
PACK DATE

(l) Sales invoice price $83.50
(m) Sales at cost price $47.20
(n) Freight cost ..... $ 2.40
(o) Discount rate allowed 15%

This covers all the data that might be desired for an analysis of the sales. The sales are punched on a card punching machine. The operator of this machine has a code form to follow that simplifies the work of entry. A card punch can be operated as rapidly as a typewriter.

17. *The sorting machine.*—A necessary adjunct to the tabulating machine is the sorting machine. This machine is arranged to sort the cards according to certain combinations of holes. The cards are dropped into compartments by classes of data. There is a very complicated mechanism involved in this process. It is accomplished by means of electric contacts that can be made only when the holes are located in the places for which the machine is adjusted.

Although the operating mechanism is complicated, it is a simple matter to set the machine for sorting cards for any data desired, and it will accomplish that result in much less time and more accurately than by any other method. The sorting machine handles cards at the rate of 250 per minute, placing them in eleven different classes at a time.

After the cards have been sorted, the number in each group may be determined by means of the card counter. It is possible to determine in a few minutes just how many cards there are containing data

in each of several classes, merely by running them through this machine.

18. *The printing tabulator.*—The data that have been punched on the cards according to a code can be changed back to printed form on the main tabulating machine. This machine may be set up to record details and to accumulate totals, all of which will be printed on a roll of paper. It is possible to list as many as twenty columns of figures at a time and to secure totals for each one, if so desired. The machine does this work automatically at the rate of 150 cards per minute.

The tabulating equipment is useful only in large offices, but it saves an enormous amount of clerical work where it is adaptable. It not only serves to cut down the size of the clerical staff, but it also enables an organization to obtain information more rapidly than it can be obtained in any other way.

19. *Summary.*—It has been possible in this chapter to describe only a few of the innumerable labor-saving devices employed in accounting offices today. A modern, large office has the appearance of a machine room. Instead of long rows of bookkeepers perched up on high stools making entries laboriously by pen and ink, one sees a room full of machinery of various kinds, with a few operators. These new devices enable a concern to get its bookkeeping work done more accurately than ever before, and at a much lower cost.

With all of these mechanical aids, it is especially

important for the accountant to understand the fundamental principles of accounting. Machinery can be used to do the routine work of an office, but it cannot do the thinking for the executives. There must be someone in every organization who understands thoroughly all of the processes and who can direct the work effectively.

REVIEW

Enumerate the advantages and disadvantages of loose-leaf records.

Explain what is meant by a system of internal check, and how it is accomplished.

Explain what is meant by a self-proving trial balance.

Describe the types of bookkeeping machines most commonly used.

Give an illustration of the use of a combined bookkeeping and billing machine.

What are the essential features of tabulating machines?

CHAPTER XIX

PROPRIETORSHIP

1. *The proprietorship concept in accounting.*— Proprietorship, in the accounting sense, refers to the rights of the ultimate owners of an enterprise as expressed in money terms. By ultimate is meant the final or residual rights after the claims of all others have been accounted for. In the conduct of practically every business, it is necessary to obtain capital from individuals other than the organizers. In a sense, the creditors are proprietors, but their interests are not classified in the category of proprietorship.

We have been careful throughout our discussions to distinguish the liability accounts from the proprietorship or net worth accounts, although both are listed on the right-hand side of the balance sheet. This is an important distinction, but it is not always an easy matter to determine just whose equities are included in the two classes.

It has been convenient, in developing the principles of accounting, to speak of the business as an entity separate from any of the individuals whose interests are involved. Thus, we say that the business owes the creditors the amounts shown in the liability ac-

count. We do not say that the *proprietors* owe the creditors, although, in a legal sense, that often is the case. Furthermore, the statement is usually made that net worth is the difference between the total amount of the assets and the liabilities. Just what is the fundamental distinction, then, between the outside liabilities and the proprietorship claims? This question can be answered only by an analysis of the relationships between the different interested parties and the enterprise considered as an entity.

2. *Distinction between liability and proprietorship.*—From one point of view, liabilities and proprietorship are exactly alike. They both represent capital that has been furnished to the enterprise. Differences arise in the terms on which the capital is supplied. The creditors have certain definite claims as to the repayment of their investment and as to the amount of income that shall be paid. The proprietors on the other hand, have no contractual rights either to a return of the principal or of income. Their claims are strictly residual.

Normally, there is also a distinction on the basis of risk involved. The proprietors assume more risk and control, whereas the creditors assume less risk and exercise very little control. Even in this respect, the difference is one of degree rather than kind, for everyone who invests funds in a private business venture assumes some risk of loss. This is clearly evident from the greater number of business insolvencies. We hear, nearly every day, of some concern

paying "so many cents on the dollar" in settlement of its liabilities. Furthermore, the creditors of an enterprise exercise some control, if not in the direct administration of its affairs, at least as potential owners in case their claims are not met.

Thus, it may be seen that both the creditors and the proprietors furnish the same types of services, namely, capital, risk-taking, and control. One may be distinguished from the other by the degree to which these services are assumed. The proprietors assume the greater amount of the risk-taking and control, whereas the creditors furnish primarily a capital service.

3. *Sole proprietorship.*—The simplest form of business enterprise is the single proprietorship. From the standpoint of numbers, this type of organization is far in the lead. Anyone who produces a commodity or service for sale is a proprietor. There is little accounting significance to his proprietorship, however, unless he has some capital invested in the enterprise.

In this form of organization, the line is clearly drawn between proprietorship and liabilities. The proprietor usually has entire control and his investment constitutes the greater part of the capital. There are cases, of course, in which the business is carried on with a very narrow margin of capital furnished by the proprietor, but these cases are not truly representative.

The interests of the proprietor are more closely

identified with the actual ownership of the enterprise. From the legal standpoint, the proprietor *is* the business. He owns the assets and owes the liabilities. The business does not exist as a separate entity. If there are insufficient assets in the business to meet the liabilities, the creditors may force payment out of the proprietor's private estate. The balance sheet of the business, therefore, represents merely a part of the proprietor's financial condition.

4. *Net worth accounts of the sole proprietorship.* —A great many individuals who operate business enterprises keep their accounts by the single entry method. They are satisfied with the information obtained from accounts with a few assets and liabilities, but are not interested in keeping separate net worth accounts. This is probably adequate for the very small concerns, but in most cases the double entry system could be used to advantage.

The net worth accounts of the sole proprietorship are very simple. There is no question as to the distribution of net profit, since the balances of the expense and income accounts are carried directly to the proprietor's account. After the withdrawals for a period have been deducted, the balance in this account shows the amount of the proprietorship equity.

Sometimes the fiction of the business as an entity separate from the proprietor is carried to extreme lengths in the accounts. The proprietor may decide to draw a salary for his services, and to charge the amount to the expense of the business. If the busi-

ness were a separate and distinct person from the proprietor, this would be an entirely reasonable procedure. In that case, the business individual would be paying a salary to the proprietor (another individual). It happens, however, that these two personages are one and the same in the sole proprietor enterprise. Charging expense accounts for the proprietor's salary is the same as taking money out of one pocket and putting it into another. The salary expense in his business immediately becomes income to the proprietor as an individual.

There is something to be said for this procedure of charging proprietor's salary to the expense accounts. If the accounts are used for comparison with other concerns in the same line of business, allowance should be made for the fact that the proprietor performs valuable services. Inasmuch as other concerns with which it might be compared actually pay for similar services, this fact should be considered. The point should be emphasized, however, that entries of this sort are purely fictitious and are made entirely for convenience in making statistical comparisons.

5. *Partnership agreements.*—A partnership is an organization of two or more individuals who have agreed by contract to combine their capital or other interests in a business venture for their joint profit. The agreement or contract may be either written or oral and is binding between the partners. It is always desirable to have a written contract setting

forth in detail the agreements as to investments, division of profits, rights in case of dissolution, etc. This precaution reduces the chances of disagreements and even of legal disputes.

From the legal standpoint, a general partnership is very much the same as a single proprietor enterprise. The partners are jointly and severally liable to the full extent of their private estates for the debts of the enterprise. In other words, the individual partners are definitely identified as the owners of the business, and the real debtors to the concern's creditors. The liabilities of the business are looked upon in the law as personal obligations of the partners. There are limited partnerships in which the liabilities of the partners may be legally limited to a stated amount. As a rule, however, each member of a partnership agreement holds the same position with respect to the business as would a sole proprietor.

From the accounting standpoint, the partnership is different from the single proprietor enterprise. There is more reason to look upon the business as an entity separate from the proprietors. The agreement between the partners is likely to be so involved, that it can be carried out only by personifying the business. In other words, a partner might borrow from the business, or loan money to it apart from his proprietary investment, or he might enter into purchase and sale transactions with it. Furthermore, the business might employ one of the partners as a manager and pay him a salary. These are all

transactions that arise from special agreements between the partners.

6. *Partnership net worth accounts.*—Partners' net worth accounts are of particular importance in making sure that all partnership agreements are maintained. At the time of organization, the net worth accounts show the original investments. These may be equal in amount, or one may be greatly in excess of the others. In some cases, a partner might not invest any funds, but merely agree to contribute his skill in consideration of possible profits.

A drawing account should be provided for each partner. There is usually an agreement as to the amounts each partner is allowed to withdraw in any one month. In some agreements, it is stipulated that a partner must pay interest on all withdrawals. Sometimes it is the practice to allow interest on each partner's average investment before net profits are divided. It is necessary to have a separate account of withdrawals in order to compute the amount of the net investment.

A separate salary account should be kept for each one of the partners who is employed in an official capacity. Sometimes the salaries are paid in cash, while in other cases they are credited either to the drawing account or to the partner's capital account.

The drawing accounts are closed into the partners' net worth accounts at the end of an accounting period. If allowed, interest on the average balance is credited to the same account. The net profits are

then divided and credited to the several partners' accounts according to the agreement. Usually the division of profits is not based upon capital investment. It may be made pro rata or in unequal amounts, depending upon the relative importance of the services of the different partners.

7. *Corporate proprietorship.*—A corporation differs from the sole proprietorship and partnership forms of organization in several respects. In the first place, a corporation is recognized in law as an artificial person, created either by special act or under the general laws of a state, province, or country. The rights and privileges granted to a corporation are strictly limited to the purposes for which it is organized, but, within these limitations, it may act in every way just as though it were an individual. This means that it may own property, enter into contracts, incur indebtedness, and it may sue and be sued in its corporate name.

This conception of a corporation has a very important bearing upon the proprietorship accounts. The control is vested in a board of directors, which is usually elected by the voting stockholders. There are occasions, however, when the control is shifted to other investors. It is not always evident, in other words, as to just which equity represents the proprietorship interest.

As a general rule, the holders of the common stock have all the voting privileges, but frequently the preferred stockholders are given equal rights. Some-

times the bondholders take over the operating control of a business, if the corporation has failed to meet its interest obligations. Furthermore, provision is sometimes made for bankers to have a voice in the management, particularly if they have had a part in securing some of the capital.

8. *Classification of security issues.*—A corporation secures its capital through the sale of securities to investors. In modern finance, there are a great many opportunities for corporations to obtain funds from different sources, simply by issuing different classes of securities. The organizers usually receive common stock for their original investment. Additional capital may be secured from the proceeds of the sale of additional common stock to outside investors, or entirely different types of securities may be used.

Corporation security issues may be divided, first, into two broad classes—capital stock and bonds. The capital stock equity represents, in a general way, the proprietary interest, while the bonds are liabilities. Each of these classes may be further subdivided into any number of special issues. Capital stock may be divided into preferred and common, and the bonds may be classified according to the degree of security afforded. There are first and second mortgage bonds, collateral trust notes, equipment notes, debenture bonds, and income bonds, each having a specific claim upon the assets and income of the corporation.

The different classes of securities represent a distribution of the control and risk-taking functions of the capitalist. The distinction between common and preferred stock is made chiefly on the basis of control, preference as to dividends and priority in the event of liquidation. The common stock usually carries all of the voting privileges, but the preferred stock usually has first claim on the profits for dividends at a fixed rate. Preferred stock may be cumulative, that is, if the dividends are not paid in any one year, the amount must be paid out of future earnings before anything can be paid on the common stock.

Common stock may be divided still further into many other classes, including voting and non-voting classes. During the past few years, a number of the large corporations have issued what they call Class A and Class B common stock. Class A stock, which has the sole voting privileges, may be kept by a group of organizers who wish to retain control of the company, while Class B is sold to outsiders, although both classes may share equally in the profits.

There also may be several classes of preferred stock. Thus, there may be eight per cent cumulative preferred stock, which is next to the common so far as risk is concerned; seven per cent prior preferred stock, which assumes a little less risk and a lower rate of dividends; and six per cent special preferred stock, which is still safer.

The bond issues also may be graded by classes,

from those that are hedged about with provisions for the safety of principal and income down to those that can hardly be distinguished from stock. For example, there may be very little difference between a preferred stock and a debenture bond, yet the former is considered as a proprietorship item and the latter as a liability.

It is not the purpose of this text to present a detailed description of corporative securities. It is important, however, for a person who wishes to make use of accounting statements, to have some knowledge as to the bases upon which the elements of control and risk-taking are parceled out in the modern corporation.

9. *Proprietorship represented in stockholders' equity.*—A security is an evidence of a contract between the corporation and the investors. It is an agreement as to the use of funds intrusted to the corporation and the distribution of the profits obtained from operation. The distinction between the securities which represent liabilities of the corporation and those which represent the proprietorship equity is not always easily made. Sometimes the common stock is issued as a bonus with the bonds or preferred stock. In such a case, there is no investment represented by the common stock. It can hardly be said that the major element of risk is assumed by stockholders who have invested nothing.

It is customary to make a distinction on the basis of the titles applied to the securities. Those that

are called capital stock are listed as proprietorship items, and other securities are called liabilities of a corporation. The capital stock and surplus accounts are used to represent the net worth.

10. *Corporate surplus.*—The capital stock of a corporation is carried permanently in the accounts at a fixed figure. This may be the par value of the stock issued or it may be a stated figure for stock without par value. The amount of the stockholder's equity changes, however, as a result of business operations. Net worth either increases or decreases as the result of net profits retained in the business or of net losses incurred. These changes are carried in separate proprietorship accounts. In this respect, the corporation accounts differ materially from the sole proprietorship and partnership accounts.

Undistributed profits are kept in surplus accounts separate from the original capital, as a matter of convenience. The general laws governing the formation and operation of corporations provide that dividends may not be paid out of capital. This is for the protection of creditors. If the directors of a corporation were allowed to declare dividends without regard to profits, they would be tempted to take care of the stockholders' interests first, in the event of unfavorable financial conditions. If the two accounts are kept separately, an examination of the balance sheet will always reveal the excess of net worth over the original capital invested. This will show the extent to which the margin of safety for

other classes of securities is being increased or decreased.

11. *Classification of surplus accounts.*—The excess of net worth over the original investment of the stockholders is called "surplus." As a rule, one account is sufficient for this item, but corporations have adopted the policy, for various reasons, of using several account titles for surplus. It is not at all uncommon to see a half-dozen surplus accounts on a balance sheet, some of which represent "earned surplus" and others "capital surplus." For the purpose of determining net worth, they could just as well be carried in a single item.

A useful purpose is served in classifying surplus, however, in setting forth the financial policy of the corporation. The profits are allowed to remain in the business for definite reasons and these may be indicated by placing special labels on parts of the surplus.

Profits may be retained, rather than distributed in dividends, for four main purposes, namely: (a) to take care of future expansion of the enterprise; (b) to pay off maturing indebtedness; (c) to maintain a reserve from which dividends may be declared in years when there are no profits; and (d) to take care of possible losses without impairing the invested capital.

A reserve for additions and betterments is a surplus item that shows the intentions of the directors to use profits for expansion. At the end of each

year, after the net profits have been determined, the directors appropriate a certain amount for extensions. An entry is made debiting the Profit and Loss account and crediting the Reserve for Additions and Betterments. The funds with which to make the improvements, of course, are represented in the current asset accounts on the other side of the balance sheet. Oftentimes, this reserve is "funded," in which case the funds are actually set aside so as to be available when needed.

The method of payment is usually stipulated in the contract covering an issue of bonds. This may call for repayment out of profits. Under such a provision, a corporation is required to set aside each year, out of earnings, a certain amount of funds that will accumulate to the face value of the bonds at maturity. To meet this requirement, the directors appropriate the proper amount of earnings for a sinking fund reserve, and this is carried among the surplus accounts on the right-hand side of the balance sheet. The funds set aside, of course, are taken from the Cash account and the amount is shown on the asset side of the balance sheet.

The earnings set aside to maintain an even flow of dividends may be earmarked by the title "Undivided Profits." A fourth class of reserve is carried for special contingencies. It is possible that a concern may fear that its product, or part of its equipment, may be suddenly rendered obsolete by some radical change in the industry. To be prepared to

meet such a situation, the directors order a part of the surplus to be labeled "Reserve for Contingencies," against which the loss or replacement may be charged.

12. *Corporate deficits.*—If a corporation operates at a loss, the net worth decreases. Since the original investment is carried in the capital stock accounts at a fixed figure, it is necessary to record the deficit in another account. A deficit is, of course, negative surplus, and should be treated in the same class of accounts. Sometimes the deficit is carried merely as a debit balance in Surplus. It is not a good policy, however, to list a surplus item on the asset side of the balance sheet, as it is likely to mislead a person who is not thoroughly familiar with accounting methods.

An account entitled "Deficit" should be opened. This would appear on the asset side of the balance sheet as an offset to the capital stock figures, which are listed on the other side. Some corporations attempt to cover up their deficits by the use of misleading titles. This practice is distinctly unfair to creditors and investors and cannot be too severely condemned.

13. *Capital surplus.*—It is possible for a corporation to start out with a surplus. If the amount paid in by the stockholders is greater than the par value or stated value of the shares, the excess is credited to a capital surplus account. This should be kept in an account distinct from the earned surplus, because it is entirely different in nature. A capital

surplus is purely a technical expression and does not constitute an element of surplus in the usual sense of the term. It is, in fact, a part of the original investment.

This method of financing is often used by banks so that they may show a surplus on the first statement. A bank may be capitalized at $100,000, but sell the stock at a premium of $25,000. However, this practice does not reduce the liability of the stockholder in case of failure. Under both the national and state banking laws, the stockholders may be assessed an amount equal to the par value of the stock outstanding, to pay the debts of an insolvent bank.

If the bank issued $125,000 in capital stock for the original capital investment, the stockholders would be liable for an additional assessment of the same amount. If, on the other hand, the bank issues only $100,000 in capital stock for an initial capital investment of $125,000, the stockholder is contingently liable for $100,000 additional in case of insolvency.

14. *Capital deficit.*—Corporations rarely, if ever, recognize the existence of a deficit at the date of organization. This is because stockholders are liable for the full par value or stated value of the stock. If a person subscribes for $100,000 par value of the stock of a corporation and pays in only $50,000, he can be assessed for the other $50,000 to meet outstanding liabilities. Furthermore, if he sells his stock, the purchaser becomes liable to the corporation for

the $50,000. In other words, the holder of a share of stock that has not been fully paid is liable for the balance and may be assessed at any time.

In view of this fact, the organizers of a corporation usually see to it that the stock is fully paid at the start. This may be accomplished by setting up an intangible asset, such as goodwill, to offset the capital stock figure. If the goodwill is considered by the directors to be worth the amount paid for it in capital stock, the certificates may be stamped "fully paid and non-assessable."

REVIEW

Explain the distinction between proprietorship and liabilities.

State the legal status of a sole proprietor with reference to the liabilities of the business.

What is the significance of a proprietor's salary account in the books of a sole proprietorship enterprise?

Explain in what way the net worth accounts of a partnership differ from those of a sole proprietorship business.

Show the difficulty in distinguishing proprietorship from outside liabilities in a corporation.

What are the purposes for which surplus accounts are established? What is meant by "capital surplus?"

CHAPTER XX

CONSTRUCTIVE ACCOUNTING

1. *Scope of constructive accounting.*—The accountant has two rather distinct types of work to perform. These were described, in Chapter XVI, as consisting of the analysis and interpretation of accounting data, on the one hand, and the administration of the clerical work involved in making the detail records, on the other. The chief accountant of any large organization divides his time between these two important functions. A sufficient amount of illustrative material has been given in the earlier chapters to show the nature of the accountant's work in these fields.

The term "constructive accounting" is applied to that phase of accounting practice which consists in the design and installation of practicable accounting systems. This includes both the development of principles for the analysis of accounting data, and the rules or procedure that control the recording and reporting of the essential facts concerning business operations.

While it is necessary in a large accounting office to subdivide the work and to delegate authority, yet it is essential to have all decisions made in accordance

with the broad policies of the organization. This can be accomplished only on the basis of a well-constructed plan or code of rules. The accounting codes of some corporations set forth in detail the methods of handling every conceivable type of transaction that might occur. Any person in the organization may find out how to record properly the particular transactions that he is called upon to handle.

The extent to which an accounting system may reach is illustrated in the code of a large telephone company. In this system, the man who has the job of installing telephones or repairing the line makes the first accounting record. If he replaces a broken glass insulator, he finds in his code book just how that fact should be recorded. His report is then routed through the office, according to definite instructions, until the costs are finally allocated to the appropriate general ledger accounts.

2. *Improvement in accounting systems is of relatively recent origin.*—Railroad accountants were pioneers in the field of constructive accounting in the United States. The American Railway Accounting Officers' Association was formed in the early eighties in response to a demand for uniform methods of reporting intercompany revenues and joint-facility expenses. Their interests soon broadened to include all phases of railway accounting work. This association has had a great influence upon the development of general accounting practice. For more than forty years, its members have been studying the funda-

mental problems of accounting with reference to railroad properties and have been developing a body of principles that have been adapted to other lines of business.

The Interstate Commerce Commission also has had an important part in the development of modern accounting systems. It was given advisory power over railroad accounting practice in 1888, and it was given authority by act of Congress in 1907, to prescribe the methods of accounting for all concerns engaged in interstate commerce. It had also been given power to regulate the accounting practices of certain classes of public utilities, when their operations involve interstate commerce. Through the establishment of standard rules for reporting, the Interstate Commerce Commission has established certain accounting principles that have had wide application.

Since the enactment of the Federal Income Tax law in 1913, the Treasury Department has had a decided influence upon accounting practices in every line of business in the United States. It is the function of the Income Tax Unit of the Bureau of Internal Revenue to establish rules and regulations for the purpose of ascertaining the amount of net income of corporations and individuals. In carrying out its duties in this connection, it has been a factor in the development of a body of accounting principles.

In more recent years, the growth of the holding company in American industry has been influential in focusing attention on the desirability of standard

accounting practice. These are all factors that have had some bearing upon accounting practice. The control of corporations through public regulatory commissions, the administration of income tax laws, and the growth of large-scale units in business all have played a part. These influences are bound to increase in importance in the future.

3. *Trade associations and uniform accounts.*—One of the chief activities of trade associations, in recent years, has been the construction of uniform systems of accounts. This movement started in response to a demand on the part of the members for comparative data. It was found that account titles meant different things in the statements of various concerns, so that it was impossible to compare costs, or any other accounting data. More than fifty trade associations have taken steps to introduce uniform systems of accounting.

Trade associations are formed for the mutual benefit of their members. They attempt to secure information that will be useful in improving methods and in raising the plane of competition. It is in the interests of the trade to have all of the members informed as to their own costs in comparison with the average. This is accomplished by uniform reporting. Each member sends in to the association office a detailed statement of operations. The names of the reporting firms are kept secret, so that no member can identify the reports of competitors. The reports are tabulated and averages are computed for the en-

tire group. Each member can then compare his statement with the average for the trade.

This method of securing comparative data has been fostered locally by the Department of Commerce of the United States. At first, there was some fear that this practice would subject the members to the provisions of the antitrust laws, but their rights in this connection have been definitely established. The antitrust laws prevent price-fixing agreements, but allow the interchange of cost information. Each member is free to conduct his business as he chooses, but he is able to judge as to the efficiency of his concern by comparing his figures with the standards set by the association.

4. *Limitations of uniform systems of accounts.*— Some accountants confuse the idea of a uniform accounting system with the use of record forms and attempt to introduce a common method of office practice. This generally results in confusion and defeats the real objective of a uniform system. The particular forms of records and the types of labor-saving devices to be used in an office are matters of individual application. Uniformity is desirable in the use of account titles and in the interpretation of accounting data, but the method of entry is of no importance.

Office appliances have their place in accounting systems and, when properly adapted to the needs of a particular concern, will result in definite economies. The introduction of labor-saving devices, however, should not be confused with the adoption of uniform

accounting systems. There are, of course, certain forms that tend to become standard in a trade, but their use should be adapted to individual conditions.

5. *The general problems of constructive accounting.*—To construct an adequate system of accounting for an enterprise, it is essential to have a definite plan of procedure. The purpose of a system is to obtain as much information concerning the operations of the business as is possible, consistent with a reasonable expenditure of funds for clerical help. There are three steps involved in attaining that result. They are as follows:

(a) The objectives of the system should be stated in definite terms.
(b) An account classification should be constructed that will give the information desired, as stated in the objectives.
(c) A system of records should be devised that will enable the accounting department to collect the necessary data in an economical manner.

The accountant is confronted with difficult problems in connection with each of these steps. The first consists of clarifying the statement of the general problems. An accountant could expect just about as effective results from a system constructed without a clear statement of objectives as could an architect who started to plan a building without knowing the purposes for which the structure was to be used.

In the second place, an account classification sets up the plans and specifications for attaining the de-

tailed results. It is, in a sense, a sailing chart that keeps the accountant on the proper course. Just as the architect sets forth certain definite specifications which must be followed in the construction of a building, so the accountant lays out a classification of accounts that controls bookkeeping operations.

Finally, a system of records and routines must be devised that will carry the plans and specifications into effect. To carry the analogy with the architect still further, this step corresponds to the instructions of the contractor to the workmen who assemble the materials and place them in the proper location in order to complete the structure.

6. *Objectives of an accounting system.*—There are certain broad objectives common to all accounting systems. These have been emphasized throughout the earlier chapters of this text. A balance sheet statement, showing the financial condition at certain stated intervals, and a profit and loss statement, showing the income and expense of a period, are essential to any system. At this point, however, the objectives branch off from a common purpose to meet the individual needs of specific organizations.

The purposes for which accounts are used may be classified under three heads, namely:

(a) For administrative control over the operations of the business
(b) For information to investors, bankers, and other creditors
(c) For public control and taxation

The extent to which these various purposes are controlling factors in the construction of an accounting system varies widely as between different types of business and forms of organization. It is essential for the accountant to know, in advance, just how the reports are to be used.

The reports for the purpose of the investors are usually the least exacting and constitute the minimum of information to be obtained. In the case of public utilities, the requirements are definitely established by the public service commissions. These must be provided for, regardless of the wishes of the executives.

It is in meeting the needs of the administrative officers of an enterprise that most of the problems arise. Executives have different ideas as to what constitutes important information. It is impossible to state the objectives until the wishes of the executives are clearly understood.

7. *Preliminary survey of operations.*—The statement of objectives cannot be made until after a survey of the organization and operation of the business has been made. This should start with an examination of the organization of the enterprise for administrative control. There are a number of different forms of organization, each of which is applicable to certain conditions. The line and staff form of organization is effective in some cases, whereas the functional form of organization is better in others. It is not the purpose of this text to discuss forms of organization,

but it is important to note that this question has a bearing upon the construction of an accounting system.

Each administrative officer has certain definite functions to perform and the accounting system should provide him with information that will be useful in making decisions. A chart of the organization should be drawn up to show the lines of authority. If the concern is organized along functional lines, for example, there are likely to be, at least, the following positions:

(a) Production manager, in charge of the factory or other producing units
(b) Sales manager, in charge of the sales force and possibly the advertising department
(c) Treasurer, in charge of the finances of the enterprise
(d) Personnel manager, in charge of all employment matters
(e) Comptroller, in charge of the accounting, statistical, and office departments

These officers should be consulted as to the information they require, and the details then set forth in tabular form. The production manager, for example, might need the following information:

(a) A monthly report on production costs, showing details by products or orders
(b) An analysis of production costs, showing the amount of materials, direct labor, and indirect expenses (These might be computed on a unit output basis.)

(c) A report on goods in process and of inventories of raw materials and finished goods
(d) A report of forward orders and production schedules
(e) A report on purchase orders and materials received

These are only a few of the items on which current information would be needed, but they are illustrations. A similar list should be prepared for each of the other chief executives.

8. *Construction of the classification.*—After the objectives have been clearly formulated, in the manner shown above, the account classification may be drawn up. The purpose of the classification is to afford a means of collecting the data required, as set forth in the statement of objectives.

The accounts are classified into groups in outline form, so that they may be summarized in any way desired. Thus, one general account for manufacturing might be sufficient to meet the needs of the general administrative officers, but a great many accounts, showing the details, would be needed for the use of the production manager. The extent to which the main general ledger accounts would be subdivided would depend, of course, upon the number of details required for direct administrative purposes.

It is desirable to make the account classification flexible so that new accounts may be added or old ones omitted, as occasion arises. This can be accomplished readily enough, if the chart of accounts is constructed

with that end in view. The accounts frequently are given numbers for convenience. These can be arranged in series, however, so that new ones can be inserted without requiring a complete renumbering. The Manufacturing Expense account in the general ledger, for example, might be numbered 51. The subaccounts in the manufacturing ledger could then be numbered 5101 to 5199. This would provide for necessary expansion and, at the same time, serve to identify the detailed accounts with the account in the general ledger.

9. *The system of office routine.*—The account classification determines the structure of the system, but there still remains the question of office procedure. This is a very difficult part of the work. It is necessary to collect data from a great many sources and provide systems of internal check, so as to insure that the records are accurate.

A complete accounting system touches every part of an organization. The original entries are made by persons in the operating departments, who are not at all interested in bookkeeping records. Thus, the workman at a bench makes out his time card or files a requisition for materials. These are the first records that enter into the accounting system.

The effectiveness of the whole system depends upon the care with which these original records are prepared. A system can be wrecked simply by having the forms so complicated that the workmen do not understand how to fill them out. Furthermore, it

is necessary to have the hearty coöperation of all departments. If the foreman or superintendent in any department is not in sympathy with the system, he can make it extremely difficult to keep the records accurately.

In planning the office records, a master chart should be prepared, showing the course of the records from the original sources through to the final general ledger entries. There should be a continuous flow of accounting data by the shortest possible route, so that the statements can be prepared promptly at the close of each accounting period.

10. *The manual of instructions.*—The instructions to those who handle the records should be carefully worded and explicit, so that there can be no doubt as to what should be done in any situation. In order to accomplish this result, a manual of instructions or accounting code should be prepared. This should include the following information:

(a) A complete chart of the accounting classification, so that a person can see the relationship of the accounts to the structure as a whole
(b) A list of all the accounts, with an explanation of the contents and purposes of each. This should include a statement of the occasion for making debit and credit entries in each account
(c) A list of the books used for both original entries and ledger accounts, together with an explanation of the routine procedure for making entries
(d) Instructions for preparing and closing the accounts. This should include instructions for

taking the inventories and making the adjusting and closing entries

(e) A list of all the accounting forms, and instructions as to their use

(f) A list of the equipment, such as bookkeeping machines, billing machines, tabulators, etc., that are to be used, together with an explanation of the methods of applying them to the system

Not all of the employees will be concerned with the instructions in the entire manual. A series of instruction sheets should be prepared, describing special features of the system as they pertain to different operations for their guidance. The manual is a code of rules that should be made binding upon the entire organization by an order from the chief executive officer.

11. *Construction of a system for an entirely new business.*—The procedure that has been described in the preceding sections pertains to an established business. It may appear to be rather complicated and involved. This is undoubtedly true, but the requests for statements and information cover such a variety of demands that only an elaborate system will provide the necessary data.

The problems encountered in constructing a system for an entirely new enterprise, however, are much more difficult. In this case, there is no basis for judging the needs of the business. There are no historical records showing how the organization operates, or indicating the special requirements of the executive officers. It is extremely difficult to esti-

mate, in advance, just exactly what the volume of business will be and, therefore, how elaborate the system should be.

The statement of objectives in this case will, of necessity, be based upon the accountant's experience with organizations of a fairly similar type. The initial form of organization will be known, but this is subject to change as defects are discovered, after operations begin.

In view of this fact, the classification of accounts will be tentative in form, and subject to revision as conditions warrant. It is desirable to start with a fairly simple set of records and add to them later, when a more permanent classification has been adopted.

12. *Summary of constructive accounting principles.*—Constructive accounting is a broad field, which includes within its scope all of the activities of the accountant. It requires an understanding of business policies and operating methods, as well as the technique of accounting procedure. There are certain principles that serve to guide the accountant in devising a system of accounts and putting it into operation. These may be stated in outline form as follows:

(A) Statement of objective, for the use of
    Executives
    Investors
    Public control and taxation

(B) Preparation of account classification, such as
- Assets
  - Fixed
  - Current
- Liabilities
  - Fixed
  - Current
- Capital
- Income
- Expense
- Profits
- Losses
- Miscellaneous
- Statistics of operation

(C) Application of routine methods, as applied to the use of
- Ledgers
- Journals
- Office routine
- Appliances
- Labor-saving devices

It requires a great deal of training and experience to become properly equipped to perform the work of an accountant, but the reports prepared from the most elaborate system of records can be readily understood by anyone who is acquainted with the fundamental principles of accounting.

REVIEW

Show how trade association activities have aided in the development of uniform accounting systems.

Explain why some so-called uniform systems of accounts have been unsuccessful.

Give the steps in the development of a system of accounts for a concern.

Outline the objectives of an accounting system for any type of business.

What are the features of an accounting classification?

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